31206600580660 2

LIBRARY
OF THE
MASSACHUSETTS
AGRICULTURAL
COLLEGE
NO. 5278 DATE 11 1886
SOURCE E. A. Goodrich
S
74
W6W6
v.5
1871-75

TRANSACTIONS

OF THE

MASSACHUSETTS AGRICULTURAL COLLEGE

WORCESTER NORTH

AGRICULTURAL SOCIETY,

FOR 1871,

TOGETHER WITH A LIST OF THE

COMMITTEES AND PREMIUMS FOR 1872.

FITCHBURG:
SENTINEL OFFICE POWER PRESS PRINT.
1871.

630.06
W89m 1871-75

SECRETARY'S REPORT.

The Nineteenth Annual Exhibition of the Society was held on their grounds in Fitchburg, on Tuesday and Wednesday, Sept. 26th and 27th. The list of attractions offered by the Committee of Arrangements was more extensive and varied than usual, the *new* features being an exhibition of machinery in operation, a trial of Steam Fire Engines, and a Balloon Ascension.

The number of entries of all kinds of Stock was large, and the classes of Thoroughbred Stock, Family Horses, and Swine, were especially full. There were 112 Thoroughbreds shown, all fine, and many of them *splendid* animals.

The confident anticipations of good weather, felt by the friends of the Society on Monday night, were rudely dispelled by fog and, first, drizzling, and then drenching, rain on Tuesday, but on Wednesday the weather was beautiful, all that could be desired. The attendance was what might naturally have been expected under such circumstances, rather thin on Tuesday, but on Wednesday probably the largest the Society's Exhibition has ever drawn together.

The programme for Tuesday was carried very nearly, in spite of the rain, but in consequence of an accident at the Gas Works, no gas could be had, and Prof. King was obliged to postpone his balloon ascension till the next day.

It was, outside the Hall, especially for the exhibition of cattle, with one "Trot" by men, and one by horses, added in the afternoon.

The Plowing Match had been omitted, by vote of the Trustees at their meeting in December last, to the very evident regret of many, and it seems likely that the offer of premiums for this purpose will be renewed for the coming exhibition.

Leominster and Princeton furnished Town Teams of Oxen, which were very creditable to them and to the Society.

Very general regret was expressed at the removal of nearly all the neat stock on Tuesday afternoon, and it is earnestly hoped that some arrangement may be made by which this can be avoided in future. Our accommodations are convenient and suitable in every respect for keeping the stock over night, and it would be greatly to the advantage of the Society if this could be done. If the difficulty lies in the time of holding other Shows, let us try, through the Board of Agriculture, to have their or our times changed.

The show of Fruit, Flowers, and the finer Manufactured Articles in the Upper Hall, was *excellent*, both in quantity and quality. In *quality*, at least, it was said by many persons to compare favorably with the same departments in the New England Fair at Lowell.

The Mechanical Department in the Lower Hall was hardly in working order generally on Tuesday forenoon, but during the afternoon of Tuesday and the whole of Wednesday the many interesting and beautiful machines in operation and on exhibition, drew crowds of interested and delighted spectators. This Department, from its novelty and

real value, was perhaps the most interesting and successful part of the whole exhibition.

We confidently expect that with more time for preparation, and a better knowledge on the part of all concerned, of the demands of such an exhibition, and the capacity of Worcester North for supplying them, our future success in this Department will be more complete and gratifying than the present. A full report of the various machines will be found on succeeding pages.

Dinner was served at 12 1-2 o'clock, in the Fusiliers' Tent, by Mr. G. G. Ruggles of the Fitchburg Hotel. The president, Hon. J. H. Lockey, presided, and called upon Rev. Mr. Horton of Leominster, to invoke the Divine blessing. After an apparently hearty enjoyment of the good things provided by mine host Ruggles, the company listened with great pleasure to the Annual Address given by Dr. James R. Nichols of Boston. This we publish in full and it will most abundantly repay a careful reading.

After the address there were brief remarks by Hon. Simon Brown of Concord, and Geo. E. Towne, Esq., of Fitchburg.

On Wednesday forenoon came the exhibition of Horses in all the various classes, and the trial of Steam Fire Engines, all of which proved very interesting to those assembled. The Steamer prizes were won, first, by the Metacomet, a Jucket engine, and second, by the Rollstone, an Amoskeag machine.

At 1 o'clock, dinner was again very acceptably provided by Mr. Ruggles, and there were more partakers than could be seated at the first table. The President presided as on Tuesday. All enjoyed a feast, but for various reasons the "feast of reason" usually following was mainly omitted.

Music was furnished on Tuesday by the Leominster Band, and on Wednesday by the Fitchburg.

The events of the afternoon were horse and foot racing, and a balloon ascension by Prof. King. The latter was made in splendid style, as there was a perfectly cloudless sky and scarcely any wind, so that the "air-ship" moved slowly and almost perpendicularly upward, and continued in full view for about an hour, till the time of its landing, in the town of Groton.

Altogether, the Exhibition is very generally considered one of the most successful ever held by the Worcester North Agricultural Society.

Great credit is due to Gen. J. W. Kimball, chief marshal, and his efficient Aids, to the Fitchburg Police, to Henry J. Colburn, Esq., Sup't Mechanical Department, Wm. W. Clark, Esq, Sup't of Upper Hall, the Sup't of Horses, Cattle, Sheep, Swine, Forage, and *many* others, for *unceasing* and earnest efforts to render the Fair pleasant and profitable to all concerned.

The Secretary would again urge upon competitors the great necessity of more care and promptness in making entries and statements, and upon members of committees, of prompt attendance to their duties, or if that is impossible, an early notice *in writing* that they cannot do so.

GEO. S. HOUGHTON, *Secretary.*

DR. NICHOLS' ADDRESS.

I presume it is known to most of those whom I have the honor to address, that, during the past eight years, the facts and principles of scientific agriculture have received from me a considerable share of attention, and that, with the view of giving to these studies practical value, a farm in Essex County has been made the theatre of experimental inquiry and observation. After a quarter of a century of exacting labor within the walls of a chemical laboratory, it was with inexpressible delight that I found myself transferred to the sweet meadows and hills in the country, with opportunity of studying the nature of soils and plants upon my own farm. Is it not true that as we grow older we are drawn closer to mother earth, and that, as the time approaches when we must be folded in her arms to be resolved back again to the dust from which we were taken, we have increased longings for the intimate society of the plants and beautiful flowers which spring from her bosom? It seems to me that this love of nature, in mature life, is an instinct common to us all, and that it is a duty to heed the yearnings of the soul so unmistakably manifested.

The most delightful and instructive of the studies connected with the farm, have been upon plant life and the food of plants, and I design, in what I have to say, to call your attention, specifically, to a consideration of the *Food of Plants.* It may seem to many that a talk upon the food of plants, implies the necessity of a belief in the possession, by plants, of certain organs or powers of digestion and assimilation, and this belief should be entertained, for it is founded upon fact. Plants do indeed, in a most proper sense, eat and drink, and they are as capricious in regard to the kind and quality of the food which they demand, as are animals or human beings. It is as interesting to study the nature of the appetite and wants of a stalk of corn or wheat, or a blade of timothy, as that of a child which the mother so carefully and anxiously watches and tends during the weeks and months of early infancy. I suppose, as farmers engaged in the toil and drudgery of every day life upon the farm, you do not stop to speculate upon, or consider much, the philosophy of plant growth, or to admire the delicate springing blade or opening leaf, which are everywhere around you in early summer, but perhaps we should all be better men, and better able to rear the plant children of our fields, if we devoted more time to a study of their structure and wants. What a mystery there is in the life of a plant! How does a tree or a shrub or a blade of grass grow? This interrogatory has often been put to men of science, and the patient researches which have been made by the aid of that beautiful and

wonderful instrument, the modern microscope, enable them to give a tolerably satisfactory answer. The nature of the substances employed in building up the plant structure, is well understood, and also the form of mechanism which is adopted in the first beginnings of growth, and the chemical changes and transformations which occur, but the nature of the *vital force* which guides, and upon which all activity depends, we do not understand, and it is probable human research will never shed much light upon this mysterious, but most interesting problem. The little microscopic cell is the workshop in which great changes are elaborated, and during the season of vegetable growth this is the seat of the most intense activity. Every plant that grows upon our earth, however great or small, must be considered as having originated from a single cell, so infinitesimally small that the highest powers of the microscope are required to observe it. If we turn over one of the pebbles common in our brooks, we shall find a slimy material of a greenish hue, adhering to its under side. This covering is a true plant, but it is one of the lowest of known forms. If we examine it with the microscope, it will be found to be perfect in structure, having an organism so wonderful as to command our admiration. Feeble and insignificant as it is, it corresponds in structure with the huge oak which grows by the stream and overshadows it with its branches. The plant that adheres to the rock consists of a single cell, but that cell is as perfect and beautiful as any of those which make up the structure of the oak. The tree is but an aggregation of cells—cells piled upon cells—and the work that is carried on within them is no more complex than that which goes on in the workshop of the humble unicellular plant.

It is with a choice of terms that we designate the cell as the workshop of the plant, in which the materials that enter into its organization are elaborated and fitted to aid in the increase of its substance. The nature of the food which is manipulated within the cell is indeed peculiar, inasmuch as plants gather together the waste products of men and animals, and again fit them for the use of higher organisms. Plant food is oxidized food—food which it is impossible for animals to assimilate—and the plant, in all its functions and in the objects of its growth, manifestly occupies an intermediate position between ourselves and the insensible rocks. This is absolutely essential to the existence of man upon the earth. Of all the functions of plants, the most remarkable are connected with or related to, the solar rays, for they possess the power of utilizing the sun's heat in a way which enables them to pull apart, as it were, some of the most complex and refractory compounds known to modern chemistry. The most tiny, feeble leaf or blade of grass, has a power in chemical decomposition greater by far than is possessed by Liebig, Bousingault, or any of the great experimenters of the age. The separating, in silence, in the quiet of the meadows, by organisms so frail that we can crush them between the thumb and finger, of a compound so fixed as carbonic acid, is one of the marvels in nature which puzzles and confounds the philosopher, and leads him to bow in humility before the God of nature, whose

power so infinitely surpasses that of man. But after all, this analytical power of the plant is no less amazing than its synthetical capabilities. The work of tearing apart oxidized bodies is immediately followed by that of rearranging the elements and forming new compounds still more complex, and into these, as a fixed principle, less oxygen is allowed to enter. The great work of the plant is to disassociate oxygen from compounds, and thus store up energies which are made apparent when we burn vegetable substances as fuel upon our hearthstones, or as food in our bodies. All the forces resulting from heat and muscular exertion, have their origin in plants, and however great may be the exhibition of power, the leaves of the trees and the grasses of the fields have utilized or elaborated it all from the solar rays.

Although the food of plants and the method of appropriating it, differs from that of animals, there are analogies, not only apparent, but real, between them. In animals we have the respiratory functions, and so we have in plants, for plants breathe as truly as we do ourselves; we require our food to be composed of certain elements arranged in certain combinations, so do plants; we find it essential that our food should be in particular forms or mechanical conditions, so do plants; we must be regularly supplied with food, and this is the case with plants. These are some of the similarities existing between plants and animals, and they serve to show how intimate is the relation which subsists between plants and the higher forms of organized structures.

Although we have learned with certainty regarding the elements essential to plants, and also the forms of combination required, we have yet to learn the exact mode in which they acquire their food, and how they are able to build up such bodies as cellulose starch, albumen, oil, &c., from these elements. No processes which chemists venture upon in the laboratory, are found so difficult as the synthetical production of organic compounds. Indeed, organic chemistry has thus far proved totally incompetent to instruct how to form any one of these bodies from the elements, and for their elaboration we must look to the vital chemistry of animals and plants solely.

It is a well understood fact that without plants, animals could not exist upon our planet. In the wonderful economy of things, it is absolutely essential that there should be some intermediate or connecting link between ourselves and the mineral kingdom, and plants constitute this important link in the chain in life. The three kingdoms, animal, vegetable and mineral, are correlative and involved in a cycle of changes which are unintermitting and wonderful in their nature. We are incapable of being nourished by any form of mineral substances, but such nourish plants and are transformed by them into vegetable tissues and products, and, subsisting as we do upon plants, we draw support indirectly from the insensible rocks. The plant consumes the rock dust and attracts to itself the carbon of dead air and earth; we transform these into flesh and bones, and, as a last step in this perpetual circulation of matter, after death, they relapse again into their dead inorganic condition.

It was formerly tho't by chemists that plants lived upon humus, a compound entirely organic in its nature, and when some metals were found in the ash of plants, they were regarded as accidental ingredients, or extraneous bodies which somehow intruded themselves into the incinerated mass. In our time we know that these mineral bodies enter the vegetable structures as food, and that they cannot exist without them. The mineral portion of plants is small indeed, compared with the nitrogenized and carbonaceous parts, and this paucity of the mineral substances was, undoubtedly, the reason why the early experimenters were led into error. At present, we are acquainted with sixty-five elements or primary bodies, of which all things, animate and inanimate, are made. Twenty-two of these have been found in plants, and therefore are to be regarded as food material. Let us for a moment consider the strange metals and other substances which plants absorb into their structures. Among the metals, we find iron, potassium, calcium, sodium, magnesium, manganese, copper, cæsium, rubidium, and zinc. It has been stated that arsenicum has been found in plants, but this is doubtful. The non-metals are iodine, bromine, fluorine, chlorine, phosphorus, silicon, carbon, hydrogen, nitrogen, oxygen and sulphur. Nothing can appear more singular than the fact that the refractory metal, iron, can find its way into the stalk and leaves of plants, or that the rarer metals should be hunted out of the soil by them, and appropriated as food. Some varieties of plants have peculiar appetites, and require most extraordinary elements, in order to thrive. Tobacco is one of them, and the ash which clings to the end of the smoker's cigar contains substances found in but one or two other plants known to man. Among the rarer bodies are the newly discovered metals cæsium and rubidium, and how, or where the plant obtains them, is indeed a mystery, as the most delicate chemical tests have failed to detect these elements in soils. In common garden beets, also, the same substances have been found. Copper has frequently been observed in vegetable products used for food, and what is very singular, the metal has recently been discovered in the feathers of birds, and some of the tints in the plumage are due to its presence. The fluorine which is found in the enamel of teeth in men and animals, comes from plants, as does also the manganese which accompanies iron in the blood. Aluminium, the metal which within a few years has been regarded with special interest as of great service in the arts, has been found in certain species of lycopodium, and zinc in the viola coliminaria, a plant common to some sections of France. Bromine and iodine are found in the marine algæ, or seaweeds, and for a long time all of these important substances employed in medicine and the arts, were derived from sea plants cast upon shore by the waves.

The organic constituents of plants, elaborated or formed from combinations of the elements, carbon, hydrogen, nitrogen and oxygen, make up the largest portion of their bulk, and therefore must be regarded as of essential importance as food. Before considering the sources and value of these agents, to vegetable structures, it will be interesting to examine briefly the conditions under which plants start

into existence, and forces or agents which are involved in developing and sustaining the embryo before the plant has the power of seeking its own food.

In all the changes and evolutions constantly going forward in the vegetable world, the sunbeam plays a most important part. Analysis of a sunbeam shows that it possesses three distinct functions or powers. It is capable of supplying light and heat, and also it has *actinic* force, or the capability of producing chemical decomposition and recomposition. Upon the chemical influence of the sun's rays depends the germination of seeds as well as the growth of the plant. We bury the seed in the ground and shut it out from the influence of light, but we do not place it beyond the reach of the sun's actinic influence, for that penetrates like heat to the little earthy couch where the embryo plant lies hid, and arouses it into life. Light, or the luminiferous rays of the sun, so important to the well being of the plant, is actually inimical to the excitation of vitality in the seed. How singular is this fact! A series of carefully conducted experiments have proved that seeds will not germinate in light, although supplied with heat and moisture, when the actinic rays are cut off. Deprived of the luminous rays, with the actinic in full force, they spring into life with great rapidity. Seeds sown upon the surface of the earth will scarcely germinate, as soil cultivators very well know, and on the other hand, seeds buried so deep that the actinic rays cannot reach them, will certainly perish. The planting of seeds so as to secure the proper distance below the surface, is a most important point in husbandry, as it has much to do with the early starting of the plant and the success of the crops.

How beautiful and wonderful is the process of germination when the chemical and vital phenomena are set in motion by the actinic rays. The starchy particles of the seed become converted into gum and sugar, upon which the young plant feeds. The tiny root peeps out from the husk and with mysteriously directed powers plunges downward into the fertile soil. The slender plumule pushes upward towards the light. The soil cracks and heaves, and the infant vegetable emerges, fresh and moist, into the world of air and sunshine. With the unfolding of the first pair of leaves, and with the first lighting of the sunbeam upon their tender tissues, commences a series of chemico-vital phenomena wholly different from that of the preceding stage of existence. The plant is now fairly dependent for food upon its own energies, and root and leaf are the theatres of great activities. None of the elements named as constituting the food of plants, exist as such in them, save oxygen and nitrogen.

Half the weight of a dried plant is carbon, and yet it does not exist in it as free carbon, it is all locked up in combinations of greater or less complexity. There is not one of these elements of food that can be supplied to the plant in its naked condition, as they not only have no power to nourish, but they are positively poisonous. There is much misapprehension regarding these points, among farmers, which arises from not clearly understanding the statements of writers upon the chemistry of agriculture. It is not infrequent that inquiries are

received concerning the cost of nitrogen, carbon, phosphorus, &c., and sometimes orders are sent for these agents which are designed to be used for fertilizing purposes. While it is true that nitrogen is an element needful to the nutrition of plants, it must be presented not alone, but in one of two forms of combination, either as ammonia or nitric acid, and further, the acid must be in association with an alkali, as soda or potash, in order to be safely employed by the farmer. In either one of these forms it is of immense value as plant food. Nitrogen is a gaseous body and has neither taste, color or smell. It cannot be burned, it will not support combustion, and it cannot be breathed into the lungs. It is a strange negative element, and yet without its influence not a stalk of corn or a blade of wheat can grow. It is the most costly of all our fertilizing agents, and yet millions and billions of tons are present in the air constantly, and every plant is surrounded by and immersed in it. Is not this statement perplexing or paradoxical? Nitrogen, as it exists in nitrogenous bodies, as has been stated, is alone available for plants, and the cheapest source outside of refuse animal compound, is in the form of nitrate of soda. This salt, known as Chilian saltpetre, is sold at the present time at about four cents per pound, which makes the nitrogen it contains cost about twenty eight cents per pound. The nitrogen sulphate of ammonia, at present market rates, costs thirty-five cents, and I have not found it so readily available or prompt in its action upon my fields. For grass lands, as a top dressing, the nitrate of soda has proved with me a profitable agent. It brings in the better quality of grasses and largely increases the crops. It should be pulverized fine, mixed with an equal quantity of fine, seasoned peat, and sown evenly over the field, giving to each acre two or three hundred pounds of the salt. Without a supply of nitrogenous food, plants become feeble and, ultimately, die, hence, we must supply it in some form, either as it exists in manure or in commercial substances. The soil does not furnish it in sufficient abundance, neither does the atmosphere, in any available form. There is always a little ammonia in moist air, which comes from decaying animal or vegetable matter, and there are also traces of nitric and nitrous acids in rain water, but these sources of supply are wholly inadequate to the wants of plants upon most fields. An acre of wheat yielding twenty-five bushels, requires, in straw and grain, forty-five pounds of ammonia. The results of careful experiments show that under the most favorable circumstances no more than ten pounds of ammonia is ever supplied to an acre of soil by rain water, so if all the ammonia of the rain fall is assimilated, thirty-five pounds in addition would have to be supplied to meet the wants of the wheat field. Carbon, the agent so largely consumed by plants, fortunately costs us nothing. The farmer need not trouble himself concerning this important element in plant food, for the atmosphere furnishes an abundant supply for all our wants. It is supplied in the form of carbonic acid, and we do not know that it can be assimilated through any other carbon compound. A carbonate, unless it be of potash or soda, is practically valueless to the farmer. Carbonate of lime in any form cannot be regarded as a

fertilizing substance having a commercial value. Very strenuous attempts have been made to induce farmers to purchase ground clam and oyster shells, the venders alleging that they were equal to ground bones in fertilizing nature. Clam shells are composed of carbonate of lime, while bones are made up of the phosphate of lime, quite a different substance chemically and agriculturally considered. The shells are composed of carbonic acid and lime, the bones, of phosphoric acid and lime, the former acid having no money value. Recently, the rock substance known as dolomite, a double carbonate of lime and magnesia, has been placed on the market and highly recommended as a fertilizer. This powder is of but little service to plants, as it holds no elements of food which are not supplied gratuitously by air and earth, in most localities, and it has the disadvantage of being quite insoluble. This rock powder, and other calcic carbonates, should not be confounded with sulphate of lime which is plaster or gypsum. In this substance, sulphuric acid or oil of vitriol is in combination with the lime, in place of carbonic acid, and a very different chemical and fertilizing agent is supplied It has high value as an application to some fields, although we cannot define positively its method of action. The experiments which I have made with plaster go to prove its good effects are due rather to the acid than the lime It has the power of fixing the ammonia of the atmosphere and forming sulphate of ammonia which is a salt of much value. In applying gypsum to our soil, we must remember that but a small quantity can be made available in a season, as it requires nearly five hundred pounds of water to bring one pound of it into solution. Half a ton is sufficient dressing for an acre of ground.

The element hydrogen is freely supplied to plants by dew, mist and rain, and therefore is costless to the husbandman. It is only through water that hydrogen can be presented to the plants, but this is by no means its only important office. It enters the plant as water and it is through its agency that all the various forms of food are rendered assimilable. It is the liquid medium which holds all the inorganic substances and forms the aqueous current which unceasingly flows through the little cells of plants. They are absorbed and appropriated as food.

Enormous quantities of water annually descend upon the land, although we think we have good reason to complain of the supply furnished during the past two years. If the rain fall be but twenty inches per annum, it corresponds to something like two thousand and twenty tons of water falling upon each acre every year. Much of this is carried off by evaporation or through drainage, still a large proportion is retained by growing plants, or passes through them, aiding their most important functions. It can be shown that a gallon of water passes through a single plant of wheat in a season, and the aqueous exhalations from the broad disk of a common sunflower each day amounts to six or eight ounces.

The wonderful substance (formerly so rare and costly), phosphorus, is so essential an ingredient in the food of plants, that not one of any kind can flourish without it. This highly combustible body, so offen-

sive to taste and smell, and withal so poisonous, enters the plant in combination with oxygen, which combination forms phosphoric acid. The entire supply of phosphorus employed in the arts, comes from plants, and they hunt it from the soil, atom by atom, and incorporate it into their structures. Animals feeding upon plants abstract the element and it takes its place in the bones, in combination with lime, forming basic phosphate of lime. We gather the bones of the dead animals and, after calcination, subject them to chemical treatment, and thus isolate the phosphorus in a pure state, in large quantities. How curious is the cycle of changes and transformations, and we can in no way obtain a clearer conception of them than by reflection upon the fact that the phosphorus found upon the end of every friction match we use in our dwellings, has been gathered from the soil by vegetables, and passing through their organization, it has taken its place in the bones of oxen, cows or horses, and from thence passed into the laboratory of the chemist, where it is fitted to subserve the most useful purposes. If this substance had a tongue what an interesting history of its adventures it could unfold.

The amount of phosphorus, or phosphoric acid, in the soil, is usually insufficient to meet the wants of the plant, and hence, the farmer must furnish supplies if he wishes to increase his crops. Formerly there were but two sources of supply, that from manure, or animal excrement, and that from the bones of animals, but now we have a third source in the mineral coprolites or phosphoric deposits found upon the coast of South Carolina. From these substances what are popularly known as superphosphates are made and sold largely in the market. The superphosphate of lime, true and simple, as known to science, is a rather whitish gray powder without odor, having an acid taste. It is made from bones by first calcining them and then dissolving the powder in oil of vitriol. In this method of manipulation we remove from bone phosphate of lime two equivalents of lime and replace them with water, and thus we have a superphosphate of lime. By a similar manipulation we can prepare superphosphate from the mineral rock masses before spoken of. The phosphatic deposits from Charleston contain from 30 to 60 per cent. of phosphate of lime, and when powdered and properly treated with acid, they serve nearly as good purpose as bones, as a source of phosphoric acid. But if the powder is unacted upon by acid it is almost wholly inert as a fertilizing agent. In this we see the importance of the faithful and skillful treatment of the substances by phosphate makers. Finely powdered bones serve a good purpose in the soil when used in the raw condition, as their structure is different from the coprolites. The gelatine they contain promotes decomposition and aids in rendering the bony structure assimilable.

I have said so much in public addresses and through the press, upon superphosphates, that I ought not to dwell upon the subject here, but I must be permitted to say that the persistent exposure of frauds, and the explanation of the true nature of the article, has had the effect to improve the character of the commercial phosphates very decidedly,

but still it is far from what it should be. After much observation and thought upon the subject, I have reached the conclusion that it is difficult, if not impossible, for manufacturers to supply, in a large way, through the ordinary channels of trade, superphosphates, or any compounded fertilizer, so as to give the farmer a just return for his money. The reasons for this conclusion are that the elements of plant nutrition, or the three most important agents which should enter into fertilizing compounds—phosphoric acid, potash and nitrogenous bodies—have a fixed market value, and the difference in price between their purchase, in moderate or large quantities, is not great enough to give to large manufacturers an advantage worthy the attention of honest men. A bag of nitrate of soda (300 lbs.) holding nitrogen, or of kainrite (chloride of potassium) holding potash, or a ton of bones or coprolites holding phosphoric acid, can be purchased at original sources of supply at a cost but a trifle higher than is placed upon them when large amounts are taken. The margin of cost between large and small quantities of raw material is not great enough, under usual conditions, to compensate honest men for preparing honest compounds, as the cost of manipulating and handling such heavy and bulky bodies is very great. This cost added to freight and the commissions to middle men, wholesale and retail dealers, will consume a much larger sum than can be secured by advantages of purchase of raw materials. It is true, the owners of sulphuric acid works and of coprolite deposits, must have considerable advantage, on the score of cost, over those who undertake to manufacture fertilizers in a small way, but this advantage, I contend, is insufficient to afford satisfactory profits when good articles are produced. They do not secure the advantage of half a cent a pound on the acid, as that is a large manufacturer's profit, and a monopoly of any source of phosphoric acid, potash or nitrogenized products, is now almost impossible. A farmer preparing his own fertilizers has an immense pecuniary advantage over a large manufacturer. He can prepare them in seasons of leisure when the time consumed in manipulation does not enter in as an element of cost. He saves the commissions paid to large and small dealers, he saves in cost of transportation, and he can purchase pure raw materials at nearly as good advantage as the manufacturer. Why should not the farmer prepare his own fertilizers? It requires but a small amount of skill, but if the farmer feels that he is not sufficiently well educated or experienced, he must remove these disabilities at once by reading, study and experiment. The farmer of the period, to succeed, must be competent to prepare the food necessary for the plant children of his fields, or else he must expect to be left behind in the work of profitable husbandry.

In order to show how farmers are subjected to loss in the purchase of manufactured fertilizers, I will present the average cost of seventeen of the most popular superphosphates, the cost having been ascertained from accurate analysis of samples found in the hands of dealers. The money value of the seventeen superphosphates averages $16.35 per ton, and the average price at which they are sold by dealers is $51.25 per ton. These results give an average loss to farmers, upon every ton

purchased, of $34.90. Some of the superphosphates, so called, cost the manufacturer less than $10.00 per ton, but they had a selling price of $50.00 per ton. The highest cost of any one specimen was $32.00, which is sold at $60.00. The loss to the farmer on a ton of the former would be $40.00, on the latter, $28.00. Now it is evident that none but the most wealthy farmers can afford to buy these products, and it is equally evident, if they purchase many of them their more sensible neighbors will soon find them objects of support in the poor-house.

Potash holds a most important place in the list of substances consumed by plants, and, hitherto, much anxiety has been manifested regarding a supply equal to our wants A few years ago we were acquainted with no sources of the agent save that of the ash of plants, and as mineral coal came into use for furnishing household warmth, wood ashes and the potash salts obtained from them, became very scarce and costly. Every year the farmer removed from the soil large quantities of potash in his crops which he could not return again through the excrement of his animals, and therefore it was evident his lands were becoming impoverished to an alarming extent. High cultivation, as respects potash, increases this impoverishment, as all cultivated plants are richer in this substance than those growing spontaneously. To obtain a clear understanding of the needs of the soil, it may be stated that an acre of wheat producing 25 bushels of grain and 3000 pounds of straw, removes about 40 pounds of potash in the crop. Can any farmer before me conceive of that number of pounds of potash existing in the soil of any one acre of land upon his farm? We know it must be present and within easy reach of the plants, else not a blade of wheat can grow and mature the seed. Nearly all soils, of course, contain potash, but the quantity is often insufficient for crops of any of the cereal grains.

A crop of corn raised upon my farm in 1869, of 100 bushels to the acre, removed, in kernel and stalk, 150 pounds of potash and 80 pounds of phosphoric acid. Now I did not supply to the crop all this potash and phosphoric acid, but I gave an important lift in feeding to the plants bone dust and wood ashes, which supply these agents. We cannot, gentlemen, raise large crops of corn without furnishing potash in some assimilable form, for a small crop of 50 bushels to the acre, requires about 75 pounds of the agent. A fair crop of oats, say 50 bushels to the acre, removes only about 13 pounds of potash; barley and rye remove not far from 30 pounds each.

Now we all have observed the great deterioration in our potato crops during the past ten or twenty years, and what is the cause of this alarming decrease of tubers? Can science, can chemistry point out the reason, or aid in remedying the difficulty? I think it can, and in order to place the matter before you in a clear light, let me point out the kind and amount of food which the potato demands. I have a field of potatoes on my farm which I expect will yield 300 bushels to the acre which may be regarded as an old fashioned crop. I know that this crop will remove from the soil, in tubers and tops, at least 400 pounds

of potash; also, I am certain it will remove 150 pounds of phosphoric acid. Now these amounts are very large and serve to show that the potato plant is a great consumer of the two substances, and also it shows that in order to restore our potato fields to their former productive condition we must supply phosphatic compounds and substances holding potash in large quantities. For six or eight generations, in New England, our fathers have been exhausting the soil by removing these agents, in their potato and other crops, and we have reached a time when the vegetable is starving in our fields for want of its proper food. Our farmers have found that new land gives the best crops, and this is due to the fact that such fields afford the most potash. But so long as we crop our pastures so unreasonably we cannot resort to new land, as land is not new that has had its potash and phosphatic elements removed by grazing animals. Remember that a potato field which gives but 100 bushels to the acre, requires at least 160 pounds of potash, but by allowing the tops to decay upon the field, 60 pounds of this is restored to the soil again, as that amount is contained in them. A medium crop of potatoes requires twice as much phosphoric acid as a medium crop of wheat, so that in two years with wheat, the land is deprived of no more of the agent than it loses in one year with potatoes.

The subject of the food of plants is so vast and important in its bearings upon agriculture that it cannot be properly considered in a single address, and I fear to weary you by dwelling upon it longer.

My aim has been to point out the nature of the materials which plants require, and to impress upon the minds of those who hear me, the great truth that when the farmer has gained this knowledge, and also learned the quantity necessary for a given crop, the accumulation and use of these materials is as simple as that of supplying raw materials for the manufacture of cloth, boots and shoes, or any other manufactures. A field in proper condition for culture should contain in ample abundance all the inorganic materials which the intended crop requires, and these materials should be in an assimilable condition, or in other words, they should be in a soluble condition, so that by the aid of water they can be taken up and carried through the plant organism. The proper manures for wheat and corn are the nitrogenized varieties, or those which hold nitrogen, either in the form of ammonia or as nitric acid. These should be conjoined with phosphates and potash in considerable amounts. For potash, phosphates and lime are required; the latter element, lime, enters largely into the leaves and is an important article of food for the vegetable. Gypsum, or plaster, which holds lime and sulphuric acid, is a valuable manurial agent for potatoes, especially on moist land. I have used it with satisfactory results. Roots, and also wheat, should be supplied with magnesia, as it is found largely, in the form of phosphate, in the ash of these plants. But enough has been said to show that each variety of plants demands peculiar kinds of food, and without it is supplied by the soil, or through our agency, it is impossible for it to flourish.

During the past eight years I have been endeavoring to guide the

operations of a farm in accordance with the teachings of science, and I am happy to say that I have not been led astray. It has been a delight to observe how exact and beautiful are the laws of nature, as displayed in the productions of the fields. There has never been a time when soil cultivation, as a pursuit, was more hopeful and promising than the present. We have just learned the important fact that an abundance of plant food has been stored up for our use in mines and rocks, and that we have only to reach out our hands and take all that we require. Ten years ago who could have dreamed, even, of such vast deposits of potash as have been opened up to us at the Strassfurth salt works in Germany. Some idea of the supply may be formed from the fact that at the present time more potash is furnished from these mines than from the wood ash sources of the whole world. About 13,000 tons of potash were sent to market from the United States, in 1870, and yet Strassfurth, where a dozen years ago it was not supposed that a single ton could be procured, 30,000 tons of the muriate of potash were manufactured and supplied to consumers upon both continents, during the past year. The surface salts at these mines, which hold the potash, are practically inexhaustible, and millions of tons will be supplied in succeeding years. No doubt our own salt mines will be found, upon careful examination, to afford potash, and hence we may look with confidence to the rapid cheapening of this most useful product.

Ten years ago, who could have supposed that along the river beds upon the coast of South Carolina there were millions of tons of rocks holding that important element of plant food, phosphoric acid? These rocks were indeed known, but their important character was not understood. The phosphoric rock beds of that region extend over an area of several hundred square miles, and the beds are, in places, 12 feet thick. It is estimated that from five hundred to a thousand tons underlie each acre. How vast is this supply of an agent of the highest importance to agriculture, and what a source of national wealth is open to us. At the present time, there is great activity in the work of grinding these phosphoric rocks, and with the aid of acid, preparing the superphosphate of lime, for agricultural uses.

Let me press upon your attention, in closing, two important and interesting considerations. One is, that nature has provided ample materials to supply all our wants. In mountains and caverns and streams she has deposited all elements and combinations which are essential for our well being and progress, and it is unreasonable and wicked to doubt regarding the future; and second, do not disparage science, but sustain and foster it, for it holds the key which is alone capable of unlocking nature's storehouse and bringing forth from the dark recesses of earth those rich materials which have been provided for our sustentation and happiness.

REPORTS OF COMMITTEES.

THOROUGH-BRED STOCK.

The great importance which the rearing of Stock, both for the market and dairy, has assumed in our country, makes a knowledge of the principles of breeding almost indispensable to the farmer of to-day. In no branch of agriculture has there been more remarkable progress, during the last fifty years, than in that of Cattle Husbandry; and we may say that the success and prosperity of agriculture is more intimately connected with this than with any other department of the farm. There is, indeed, much truth in the old French proverb, "No cattle, no farming; few cattle, poor farming; many cattle, good farming."

The large capital of nearly *one thousand millions* of dollars is already invested in Neat Stock in our country, while the annual products of the dairy are valued at many millions; that of butter alone, for the year 1870, being estimated at $228,578,224. Add to this the value of the immense streams of milk daily flowing into our large cities, also, the vast quantities of cheese which the cheese factories are yearly producing, and we may form some idea of the important position which this department of the farm occupies in the agriculture of the country.

The importation of the Shorthorn, Ayrshire, Jersey, Devon, and other improved breeds, into this country, mark a new era in the Stock husbandry of America. Our Native cattle had become deteriorated by careless breeding and bad management, and this introduction of breeds, the good qualities of which had been tested for several generations, could not fail of producing a favorable impression. This effort to improve our stock was opposed by many farmers who seemed to have an inveterate prejudice against imported, or blood stock, and chose rather to raise their calves from bulls that had been raised haphazard, without reference to any particular qualities. Although there still exists in many localities this unfounded opposition, yet it is gratifying to observe that this barrier of prejudice is being broken down, and that the number of Thoroughbreds and High Grades is continually increasing. The fact that "*blood will tell*," is evident, for wherever a small herd, or even a single animal, of any of these improved breeds, has been introduced into a community, a marked effect has been produced upon the stock of that locality which even the most careless farmer can not fail to perceive.

If we would improve the cattle of America, the grade bull must be abolished from our herds; he cannot be relied upon for transmitting his good qualities, if he have any, while the undesirable traits of his ancestors are liable to be reproduced in any of his offspring; on the other hand, the good qualities of the thoroughbred have been made hereditary through a long and close system of breeding. How is it that all our valuable herds of cattle have been raised, not by the indiscriminate use of inferior bulls, but by the use of those of unquestioned pedigree? It is this close system of breeding, the use of none but superior males, that has given the eminent breeders the success which they have attained. We are glad to observe that this Society has followed the example of other Agricultural Societies in the State, and abolished from its list of premiums all those heretofore offered for Grade Bulls.

Each of the various breeds has its good qualities, and should be selected according to the object for which the farmer wishes to breed. If he wishes to raise cattle for the market, the Shorthorn is undoubtedly the best; if he desires a large quantity of rich milk, the Ayrshire, which has been bred with reference to its milking qualities, through a long course of years, will be his favorite; or, if the best of butter be his object, none will excel the Jersey which has long been celebrated for its very rich milk and cream. All of these breeds were represented at the Annual Fair of the Society—the Shorthorns of Augustus Whitman, the Ayrshires of E. T. Miles, and the Jerseys of John Brooks and J. F. Brown—each having their admirers, and making a show of Blood Stock of which any Society might well be proud. That good Stock can be raised among the hills of Worcester North, we think is fully demonstrated. Owing to the great diversity of our soils and climate, we can fix upon no *one* breed of cattle which is adapted to all sections of the country. In order to grow any kind to perfection, we must select those that are adapted to the soil. The Shorthorns, in order to attain to a full development, must have a rich soil abounding in limestone where the materials for producing their gigantic frames can be obtained in abundance. The granite hills of New England are not capable of supporting them unless they are allowed a liberal artificial diet, but place them on the luxuriant pastures of Kentucky and the rich prairies of the West, and they will thrive. The Ayrshires and Devons seem, as far as climate and soil are concerned, peculiarly adapted to New England; naturally hardy and active, they are capable of enduring our severe winters better than some other breeds. In regard to the Jerseys, opinions differ widely as to the merits of the race and its adaptation to our climate, yet they have been largely imported during the last twenty-five years, and are the favorite breed in some sections of the country.

Perhaps there is no subject connected with rural economy, that is more worthy of careful study and investigation than that of breedings We have the experience and labors of all the eminent breeders of England and America to guide us, while Agassiz and Law have given us the researches which their gifted intellects have gleaned from the mys

teries of animal life. With all these facilities, may we not hope that the next half century will witness a great improvement in the stock of our land?

Your Committee on Thorough-bred Stock find entered upon the books 105 Head of Cattle in the various classes

We award the following premiums :

SHORTHORNS—HERDS.

1st premium to	Augustus Whitman, Leominster,	$12 00
2d "	Joel Page, Fitchburg,	8 00

BULLS OVER TWO YEARS OLD.

1st prem. to	Augustus Whitman, Leominster, for "Salamander,"	8 00
2d "	Joel Page, Fitchburg, for "Morning Star,"	5 00

BULLS ONE YEAR OLD.

1st prem. to	Augustus Whitman, Leominster, for "Adonis,"	6 00

BULL CALVES.

1st prem. to	Augustus Whitman, Leominster, for "Fortunatus,"	5 00
2d "	" " "Mr. Flathers,"	3 00

COWS OVER FOUR YEARS OLD.

1st prem. to	Augustus Whitman, Leominster, for "Ada 4th,"	6 00
2d "	" " "Wenonah,"	4 00

COWS THREE YEARS OLD AND UNDER FOUR.

1st prem. to	Augustus Whitman, Leominster, for "Wildflower,"	5 00
2d "	" " "Meadow Lily"	3 00

COWS TWO YEARS OLD AND UNDER THREE.

1st prem. to	A. Whitman, Leominster, for "Pride of Fairview,"	4 00
2d "	Joel Page, Fitchburg, for "Kitty Clyde,"	2 00

HEIFERS ONE YEAR OLD.

1st prem. to	A. Whitman, Leominster, for "Peri of Fairview,"	3 00
2d "	" " "Knightly Duchess,"	2 00

HEIFER CALVES.

1st prem. to	Joel Page, Fitchburg, for "Red Rose,"	3 00
2d "	A. Whitman, Leominster, for "Peri of Fairview, 2d,"	2 00

AYRSHIRES—HERDS.

1st prem. to	E. T. Miles, Fitchburg,	12 00

BULLS TWO YEARS OLD AND UPWARDS.

1st prem. to E. T. Miles, Fitchburg, for "Highlander," 8 00
2d " Edmund Houghton, Lunenburg, for "Gen. Grant," 5 00

BULLS ONE YEAR OLD AND UNDER TWO.

1st prem. to E. T. Miles, Fitchburg, for "Kimball," 6 00

BULL CALVES.

1st prem. to E. T. Miles, Fitchburg, for "Alpheus," 5 00
2d " " " "Morgan," 3 00

COWS FOUR YEARS OLD AND UPWARDS.

1st prem. to E. T. Miles, Fitchburg, for "Beauty," 6 00
2d " " " "Miller 2d," 4 00

COWS THREE YEARS OLD AND UNDER FOUR.

1st prem. to E. T. Miles, Fitchburg, for "Ellen Douglas," 5 00

COWS TWO YEARS OLD AND UNDER THREE.

1st prem. to E. T. Miles, Fitchburg, for "Myrtle 2d," 4 00

HEIFERS ONE YEAR OLD.

1st prem. to E. T. Miles, Fitchburg, for "Gracie," 3 00
2d " " " "Lady Burns 1st," 2 00

HEIFER CALVES.

2st prem. to E. T. Miles, Fitchburg, for "Lady Burns 2d," 3 00
2d " " " "Myrtle 3d," 2 00

JERSEYS—HERDS.

1st prem. to J. F. Brown, Lunenburg, 12 00

BULLS TWO YEARS OLD.

1st prem. to John Brooks, Princeton, for "Picot," 8 00

BULLS ONE YEAR OLD.

1st prem. to J. F. Brown, Lunenburg, for "Jersey Prince," 6 00

COWS FOUR YEARS OLD AND UPWARDS.

1st prem. to John H. Lockey, Leominster, 6 00

COWS THREE YEARS OLD AND UNDER FOUR.

1st prem. to J. F. Brown, Lunenburg, for "Daisy," 5 00

COWS TWO YEARS OLD AND UNDER THREE.

1st prem. to J. F. Brown, Lunenburg, for "Camilla," 4 00
2d " " " "Dinah the Third," 2 00

HEIFERS ONE YEAR OLD.

1st prem. to	J. F. Brown, Lunenburg, for "Lena,"	3 00
2d "	John Brooks, Princeton, for "Eliza."	2 00

HEIFER CALVES.

1st prem. to	John Brooks, Princeton, for "Fannie,"	3 00
2d "	J. F. Brown, Lunenburg, for "Elso,"	2 00

Your Committee regret that a strict compliance with the rules of the Society prevents them from awarding the premium on Herds to John Brooks, for we consider his the best herd. We would therefore recommend a gratuity of $8.00 to John Brooks of Princeton, for his fine herd of Jerseys.

Respectfully submitted,

L. B. CASWELL, *for the Committee.*

Statements of Augustus Whitman.

Wenonah—Age, 5 years; calved Aug. 9, 1871; weight of milk from Aug. 23 to 29 inclusive, 263¾ lbs.; average per day, $37\frac{88}{100}$ lbs.

Autumn Flower 2d—Age, 3 years; calved May 6, 1871; weight of milk from May 25 to 31 inclusive, 7 days, 255½ lbs; average per day, 36½ lbs.

Ada 4th—Age, 6 years; calved Sept. 16; weight of milk from Sept. 19 to 25 inclusive, 7 days, 311½ lbs.; average per day, 44½ lbs.

Bellflower 5th—Age, 10 years; weight of milk from March 10 to 16 inclusive, 7 days, 316 lbs.; average per day, $45\frac{14}{100}$ lbs.

Fitchburg, Sept. 25, 1871.

Statements of E. T. Miles.

Beauty, No. 240—Time of last calving, Aug. 3, 1871, suckled calf since that time. In 1870, Beauty calved May 20, and in the first six days in June last, more than 12 months after calving, gave 78 lbs. or 6 quarts per day, of milk. Her yield of milk for two years past has been 8000 lbs. per year.

Myrtle 1st, No. 648—Calved June 26, 1871; in 1870, July 26; in August following she gave an average of over 14 qts. per day; in August, 1871, her daily average was the same as near as may be.

Cleopatra, No. 311—Calved May 26, 1871; her daily average yield of milk for the month of August, 11 quarts.

Ellen Douglas, No. 1121—Calved Jan. 15, 1871; suckled calf to May 1st of the same year; the first six days in June last she gave 112 lbs. milk, or 19 lbs. per day, and her average for the month was about the same; for the first six days in August her yield has been 7 quarts per day.

Daisy, No. 330—Calved Feb. 25, 1871; first six days in June, 12½ quarts which she averaged through the month; her daily average for the month of August last, six months after calving, was rising ten quarts.

Daisy, No. 39—Calved May 7, 1871; suckled calf till August 1st; her average for the month of August was about 13 quarts per day.

Most of the cows entered in this class were not in milk the first week in June, and others were at the New England Fair at Lowell the first week in September. The record for any time required by the committee will be given.

Statement of John H. Lockey.

I offer for premium one cow, "Jessie," for milk, age 5 years; breed, Jersey; calved June 24, 1871. For six consecutive days, commencing June 28, she gave 294 lbs., an average of 49 lbs. per day. For six consecutive days commencing Sept. 4, she gave 247½ lbs., an average of 41 $\frac{3}{6}$ lbs. per day; manner of keeping, June trial, pasture feed; Sept. trial, pasture feed, corn stalks and two quarts of shorts per day. Her greatest yield in any one day in June was 51 lbs., in Sept., 42 lbs.

Leominster, Sept. 21, 1871.

Statements of J. F. Brown.

Jersey Herd Book, No. 221, Beauty—Age, 10 years; time of last calving, April, 1870, and a premature birth May, 1871—time to calve July—no record of milk was kept in June; Sept. record, 119 lbs

Fannie, J. H. B., No. 343—Age 6 years; birth of last calf, Mar. 24, 1871; June trial, 158 lbs., Sept. trial, 126 lbs.

Fawn 2d, J H. B., 366—Age 3 years, 5 months; birth of last calf, March 26; June trial, 144 lbs., Sept trial, 117 lbs.

Daisy, J. H. B., 604—Age, 3 years, 11 months; birth of last calf, Aug. 28; milk, Sept., 138 lbs.

Lady Clare—Age, 3 years, 11 months; birth of last calf, May 9; milk, June, 138 lbs, Sept., 120 lbs.

Graziella—Age, 2 years, 11½ months; birth of last calf, Aug. 7; milk in Sept., 114 lbs.

Dinah 3d, J. H. B., 602---Age, 2 years, 7 months; dropped her calf June 1st, 1870, at fourteen months of age; weight of heifer at night before milking, 440 lbs.; gave 11 lbs. milk at night, 8½ in morning; weight of cream, 8 1/16 lbs, which produced 6½ lbs. butter; had pasture feed only, and had given milk since June 1st, 1870; Sept. milk, 57 lbs.

The very dry season of 1870 affected the pasture for this season materially, and in addition to such feed as it produced, have fed grain, varying from ½ to 1½ qts. per day.

MILCH KINE.

The Committee on Milch Kine submit the following awards, viz:

HERDS OF FOUR COWS.

1st prem. to	Joel Page, Fitchburg,	$10 00
2d "	N. B. Reed, Princeton,	7 00

COWS FOR MILK—SINGLE.

1st prem. to	Augustus Gates, No. Leominster,	5 00
2d "	N. B. Reed, Princeton,	4 00

HEIFERS THREE YEARS OLD.

1st prem. to	N. B. Reed, Princeton,	5 00
2d "	Joel Page, Fitchburg,	4 00

The Committee regret that they were obliged to withhold a premium for a cow entered for Butter by Mr. Stillman Stone, Lunenburg, as his statement was not filed with the Secretary at the time of entry. [See page 77 of "Transactions."]

For the Committee,
EPH'M GRAHAM, *Acting Chairman.*

Statements of N. B. Reed.

To the Committee on Milch Kine I offer two Single Cows for milk.

One cow, age five years; breed, Shorthorn and Devon; she gave in the June trial, 292 lbs. of milk; in September trial, 236½ lbs.

One cow, age seven years; breed, Shorthorn and Devon; she gave in June trial, 250½ lbs.; in September trial, 225 lbs.

Also, two three-years-old heifers for milk; breed, Shorthorn and Devon. Dark red one gave, in June trial, 198 lbs.; in September, trial, 180 lbs. Light red one, in June trial, gave 222 lbs.: in September trial, 210 lbs.

Their keeping was pasture feed in June, in September, pasture with corn fodder.

I also offer one Herd of Grade Cows and Heifers for premium. Their ages are: one cow, five years; breed, Devon and Shorthorn; one cow, seven years; breed, Devon and Shorthorn; one heifer, three years; breed, Devon and Shorthorn; one heifer, three years; breed, Devon and Shorthorn.

Their weight of milk was as follows: in the June trial, the aggregate was 963 lbs.; in the September trial, 851½ lbs.

Their keeping in June was common pasture feed; in September, pasture with corn fodder. One calved in February, the others in March.

Princeton, Sept. 19th, 1871.

Statement of Augustus Gates.

To the Committee on Milch Kine. I offer for premium two cows for milk; breed, Native.

One cow, seven years old, Lop Horn; she gave at June trial, 256 lbs.; at September trial, 220 lbs.

Also, one other cow, eight years old, Grey Face; time of last calving, August 5th, 1871. She gave, at June trial, 150 lbs; at September trial, 200 lbs. Their keeping was common pasture with four qts. shorts.

Also, I offer two heifers, age, 22 months; breed, native.

Leominster, Sept. 20th, 1871.

HEIFERS.

The Committee on Heifers submit the following awards:

TWO YEARS OLD.

1st prem. to	Lyman Nichols, Fitchburg,	$4 00
2d "	E. D. Works, Fitchburg.	3 00

YEARLINGS

1st prem. to	N. B. Reed, Princeton,	3 00
2d "	Loriston Stockwell, Fitchburg,	2 00

JOHN MINOT, *Chairman.*

HEIFER CALVES.

Your Committee on Heifer Calves award the following premiums:

HEIFER CALVES.

1st prem. to	Lyman Nichols, Fitchburg,	$4 00
2d "	S. Stone, Lunenburg,	3 00

CALVES RAISED BY HAND.

1st prem. to	Reuben Vose, Winchendon,	4 00

THOMAS SHELDON, *Chairman.*

YEARLING STEERS AND STEER CALVES.

The Committee award the following premiums:

YEARLING STEERS.

1st prem. to	N. B. Reed, Princeton,	$3 00
2d "	M. A. Beaman, Princeton.	2 00

TRAINED YEARLINGS.

1st prem. to	M. A. Beaman, Princeton.	3 00
2d "	N. B. Reed, Princeton,	2 00

BEST MINOR TRAINER.

1st prem. to	M. A. Beaman, Princeton,	3 00
2d "	Walter S. Howe,	2 00

GEORGE WOOD.

PENS OF CALVES.

The Committee on Pens of Calves make the following report:

But one entry was made and the first premium of ten dollars is awarded to Augustus Whitman of Leominster.

PENS OF CALVES.

1st prem. to Augustus Whitman, Leominster, $10 00

GEO. L. RICE, *Acting Chairman*

FAT CATTLE.

The Committee on Fat Cattle have attended to their duties and report the following :

FAT OXEN.

1st prem. to	Reuben Vose, Winchendon,	$8 00
2d "	John Brooks, Princeton,	5 00

We recommend a gratuity to John Page of Leominster, of $4.00.

FAT STEERS.

1st prem. to	Reuben Vose Jr., Winchendon,	6 00
2d "	" "	4 00

According to the statements, all the cattle were grass fed only.

C. C. BOYDEN, *for Committee.*

WORKING OXEN—SINGLE TEAMS.

It is with a good deal of pleasure that your Committee find themselves able to put on record the fact of an increasing interest in Working Oxen. We have often wished that our farmers might possess that hearty and entire devotion to the interest of cattle training, which seems to characterize the lovers of horse flesh. All employments are yet to be tried, and awarded according as they are of *use;* and when that time comes, the training of working oxen will be elevated to that position which of right it occupies in scientific agriculture.

It has seemed to be our mission to at least aid, during the past twelve years, in placing ox training on this elevated basis, and we rejoice to know that the farming community responds, by an appreciative verdict, to what has been done. The shrewd and progressive farmer of the present day, cannot afford to keep, and improve upon, any but the most perfect breeds of cattle; and in the same view he is inclined to regard those he employs for draught. He knows that the slip-shod manner of conducting the business of matching and training oxen for

the farm, is the worst economy, even only so far as his own requirements for ox-labor are concerned; and when he comes to the market demands, every principle of true economy is against it. But it is matter for serious wonder why the majority of men acquainted with farming pursuits, fail to recognize, practically, the fact that the standards in this department of their calling are greatly elevated, and that to compete with those who are up to the times, and make the raising and sale of cattle remunerative, they must abandon their old notions, and regulate their conditions to meet the facts of the new. In our view, the growing disuse of ox-labor, in favor of horse labor, on farms, is an error; but if we were to employ the most effective means of converting all to this view, it would be ox training carried to the highest pitch of perfection. Many of the arguments brought against the use of ordinary oxen on the farm, have no force against the *trained* ox. The farm is the appropriate sphere of labor for the ox, and in his training this fact should be kept constantly in mind. In our Essays we have never failed to set forth that it is the lighter uses for which our oxen should receive training. We regret that those who compete for premiums are not more familiar with this view, for, although we honestly think that the conditions required to constitute oxen eligible to premiums by no means cover all that is desirable, or all that oxen are capable of doing, yet the most progressive interpretation of the terms cover more than competitors are wont to apprehend. In the matter of *backing*, for example, drivers show a too general ignorance as to what is desirable It is not enough that a pair of oxen are capable of forcing a load back a certain distance—they must be able to do it within certain limits of space, and *time*. To test cattle on these points, the weight of the load should be even more nicely adapted to the weight and strength of the cattle, than if the trial were for draught. We cannot escape the impression that the rule of one-third more than the weight of the team, is too high, unless the team is trained up to a high point of efficiency.

And this brings us again to say that far too large a majority of the oxen whose exploits on the cart it is supposed to be your committee's business to "sit in judgment" upon, are unworthy to compete, for the above reasons. It is quite evident that this class of teams have had no training, *with a single view to the trial for premium*. This is not as it should be. We do not plead guilty to a desire to exclude any team, and yet it would not seem consistent with the Society's intent that your committee should fail to suggest "a better way."

But the prime barrier in the way of all betterment in this matter, is, that trainers are incompetent. We wish it were possible to set forth with force and clearness sufficient to instruct the more obtuse, the actual demand our present standard makes for efficient teamsters. This demand cannot be met by the class of self-elected teamsters, (in whose minds no standard exists,) who continually thrust upon the attention of judges achievements that are not creditable, even in the eyes of the ignorant crowd. But despite the difficulties which hedge this whole subject of teamstership and training of oxen, it is slowly, but surely, developing itself as a distinct, well-defined, and most noble science

That several of our Farmers' Clubs have introduced for discussion, the subject of training, must be regarded as an encouraging "sign of the times." Let us all, as much as we may be able, agitate for some definite standard; and we can but suggest to those whose jurisdiction may include necessary modifications of our by-laws, that the qualifications for premium be extended so as to require more grace, nimbleness, and a greater discipline in the minor movements, which truly are *disiderata* in oxen to be used on the farm. We should prove recreant to our sense of what is desirable did we fail to indicate the direction the discipline should take.

It is well known that awkward cattle are utterly unable to take care of their *legs*, and of consequence the legs and feet of untrained oxen are constantly subject to mutilation, either from other legs and feet, or from the *chain*, as in logging, &c.; hence that part of their discipline which arms them against these dire calamities, is especially to be recommended. Indeed, we have known valuable pairs of oxen to be rendered *hors du combat* by their struggles in "*hauling*," not the load to which they were attached, but each other! It is painful to witness the wild and senseless ravings of cattle that have never been taught the use of their muscles, and how to apply their strength to the master's advantage.

Competitors should understand that these points which we here touch upon, are regarded as essential, and must enter into the estimate in awarding premiums. We must not only take cognizance of the thing done as an ultimate, but we must regard the "how" by which it is done. It is this *how* that makes the comfort or discomfort of all who have to do with working oxen, and generally largely affects the merit of the performance. It is impossible to sever the connection between grace and highest use—the best way to do a thing ever involves taste, economy, and pleasure to the doer—thus on the score of utility, we urge these accomplishments. But it is noticeable that farmers are wont to view this matter in a different light, and to speak of the special feats we are advocating, as merely fanciful adjuncts, and not at all a necessary part of ox-training. A little reflection will suffice to correct this conceit, and it is because the prejudice which exists has no foundation in science or common sense, that we are obliged to write so much at length in this report. In a former article we have endeavored to lay sufficient stress on several points which we deem essential; and that competitors may the better prepare to meet the requirements and thus some real advancement in managing oxen be made, we again allude to them. It is manifestly absurd to hope for any commendable degree of proficiency in "backing," unless oxen are taught the true position to be maintained. If cattle cannot keep their noses out of the ground; if they cannot hug the spear; if they cannot exert equal strength simultaneously, in shoving a load back, though never so much muscle be applied, their effort will be a failure. Such cattle have no command of their force adequate to the situation, and we could as correctly rank them in the scale of merit *before* as *after* trial. Hence the time consumed in their case is thrown away. The power to accomplish great

things lies largely in economy of forces. Our drivers ought to study the simplest laws of applied mechanics—they should familiarize themselves with the science of relatives, and to this end we want more lectures, discussions, and consequent elevation of desire and knowledge. Let us seek to compel reference to higher standards; let us seek to establish and dignify those standards we already have, by installing them in legal positions before the classes whom it most concerns to reach those standards.

The Agricultural College should bear this practical fruit, and we must plant a professorship there at no distant day, looking to the good of this noble interest.

The Committee award as follows:

WORKING OXEN.

1st prem. to	W. W. Benson, Princeton,	$7	00
2d "	W. Shattuck, Fitchburg,	6	00
3d "	Henry Wood, Leominster,	5	00
4th "	N. B. Reed, Princeton,	4	00
5th "	Reuben Vose, Winchendon,	3	00

MINOR TEAMSTER.

1st prem. to	Levi Pratt, Fitchburg,	5	00

In behalf of the Committee,

ALPHEUS B. DAVIS, *Chairman.*

WORKING OXEN AND HORSE.

The Committee on Working Oxen and Horse having attended to their duties, make the following awards:

1st prem. to	F. H. Arnold & W. W. Shattuck of Fitchburg,	$7	00
2d "	N. B. Reed of Princeton.	5	00

SILAS PRATT, *Chairman of Com.*

The premium to Messrs. Arnold and Shattuck should not be paid, because the parts of their team were owned entirely separately and were only put together to draw for the premium.

SECRETARY.

STEERS MORE THAN TWO YEARS OLD.

The Committee on Steers two years old and upwards, award as follows:

STEERS THREE YEARS OLD.

1st prem. to John Brooks, Princeton,	$5 00
2d " F. Nourse, Sterling,	4 00
Gratuity to Lyman Nichols, Fitchburg,	4 00

STEERS TWO YEARS OLD.

1st prem. to N. B. Reed, Princeton,	4 00
2d " Lyman Nichols, Fitchburg,	3 00
Gratuity to George Wood, Leominster,	2 00

ALVIN M. SAWYER, *Chairman of Com.*

SWINE.

On arriving at the pens and wagons containing the subjects of our investigations, it needed but a glance to convince one that in no kind of domestic animals had a greater change taken place within the last thirty or forty years than in Swine. Who thought of inquiring, at that time, of what breed a hog was? A pig was a pig; if he could eat and squeal, that was enough, he was all right. If he had any special points of recommendation it was the extra length of the nose and legs, and large size of the ears. Our first recollection of a breed of hogs, was the Byfield, after which came quite a number of imported breeds. Among those which were received with the most favor, was the Mackey, which was, undoubtedly, one of the best ever introduced in this vicinity. The Berkshires, while they furnished most excellent hams and parts for bacon and sausages, were deficient in the more important parts called middlings, being thin and not of uniform thickness. There is at present what is called the improved Berkshire, which meets with more favor. The Suffolk, with their fine delicate limbs and careass, were found to be too small, and inclined to fatten too early to be profitable, and they have in a great measure given place to the Essex, which now appears to be the favorite for a small breed, though many object to them on account of their color, being black. Several years ago a breed originated in Chester Co., Penn., known as Chester Co., or Chester Whites, which for size, early maturity, symmetry of form, aptitude to fatten at any age, has taken the rank in breeds of Swine, that the Shorthorn, or Durham has among horned cattle. Some, in breeding, have paid regard only to large size, have produced a large-boned, thick-skinned and coarse-fleshed animal, more inclined to grow than to fatten, which has not given satisfaction, while others, by careful and judicious breeding, have produced a superior class of swine, which, all things considered, is probably the best. Of this last class we found all the Swine exhibited, either Thorough-bred or grade Chester Whites.

The three Fat Hogs exhibited by Mr. Boyden, were fine animals, eleven months and twenty-six days old. Their average weight was between six and seven hundred; the three weighing over nineteen hundred. They were not coarse, but of fine symmetrical form, well proportioned and fat. The same may be said of the Fat Pigs of Mr. Nichols.

We often hear the remark, in regard to thorough-bred animals, that "blood tells." While this is true of swine, we think the contents of the swill pail also tell as effectually, and it is by the judicious blending of the two together, the best results are obtained.

It is a problem whether fatting pork at present prices pays. As a general rule, it is best to get an early spring pig and fatten, and kill it at from eight to ten months old. With proper care and feeding, a pig at that age will make from 250 to 300 lbs. of pork, while if it was wintered over and kept until eighteen months old, probably it would not make more than 350 or 400 lbs. The extra 100 lbs. would not pay for keeping ten months. For the dairy farmer who keeps hogs to eat his milk, it is better to get fall pigs and get them started while he has milk, and before very cold weather; they can then be cheaply kept through the winter on small potatoes, roots, or apples, and be ready in the spring to take his milk, while spring pigs would not be able to take all of it from from May until July, during the greatest flow.

At present prices, corn is, undoubtedly, the cheapest feed for hogs. In looking over the reports of experiments of the amount of pork a bushel of corn would make, in the Report of the Department of Agriculture, and other sources at my command, they vary in their results from seven to sixteen lbs. per bushel, some calling seven lbs. of meal to make one lb. of pork. We will call a bushel of meal to make ten lbs. of pork, which we think is more than it will average. We will allow for a pig ten months old, what milk, slops and other things of not much value, used to make 100 lbs. of pork. This, if the pig weighs 300 lbs., leaves 200 lbs. to be provided for, which would take 20 bushels of corn. This at 80 cts., the average price during the season, would be $16.00; the cost of the pig, $5.00, in, would make $21.00. 300 lbs. of pork at 7 cts. would be $21.00. Allowing the manure to pay for tending, would make about an even thing of it.

In conclusion, your Committee would say that, in quality, the exhibition was excellent, there was not an inferior animal exhibited, but in point of numbers it was not what it ought to have been; it was not what it might have been. There are fine specimens of other breeds owned by members of the Society, which we regretted very much not seeing.

The Committee on Swine have awarded the following premiums:

BOARS MORE THAN ONE YEAR OLD.

1st prem.	to Luther Page, Lunenburg,	$4 00

BOARS LESS THAN ONE YEAR OLD.

1st prem.	to James McIntire, Fitchburg,	3 00
2d "	Lawrin Pratt, Fitchburg,	2 00

FAT HOGS.

1st prem.	to C. C. Boyden, Leominster,	$3 00
2d "	" "	4 00

FAT PIGS.

1st prem.	to Lyman Nichols, Fitchburg,	4 00
2d "	" "	2 00

BREEDING SOWS.

1st prem.	to Franklin Nourse, Sterling,	$3 00
2d "	C. C. Boyden, Leominster,	4 00

WEANED PIGS.

1st prem.	to James McIntire, Fitchburg,	4 00
2d "	T. Benton Works, Fitchburg,	2 00

Your committee would recommend a gratuity of $2.00 to Augustus Whitman, for his Weaned Pigs.

In behalf of the Committee,

NATHAN CASWELL, *Acting Chairman.*

SHEEP.

The Committee on Sheep would award as follows:

BUCKS.

1st prem.	to J. McIntire, Fitchburg, for Cosset,	$5 00
2d "	N. B. Reed, Princeton, for South-down & Leicester,	3 00

COSSETS.

1st prem.	to N. B. Reed, Princeton,	2 00
2d "	" "	1 00

HOWARD GATES, *Chairman.*

POULTRY.

Your Committee award the following premiums:

HENS.

1st prem.	on Brahmas, to J. A. Marshall, Fitchburg,	$2 00
2d "	" Geo. E. Livermore, "	1 00

1st prem. on Black Spanish, to J. A. Marshall,	"	2 00
2d " " W. A. Carlton,	"	1 00
1st prem. on White Leghorns, J. A. Marshall,	"	2 00
2d " " H. I. Munroe,		1 00
1st prem. on Bolton Greys, to Nathan Caswell,	"	2 00
2d " " "	"	1 00
1st prem. on Domingoes, to W. A. Carlton,	"	2 00
1st prem. on Seabrights, to Master J. B. Carpenter, Fitchburg,		2 00

TURKEYS.

1st prem. to B. F. Hall, Leominster,	2 00
2d " Warren Shattuck, Fitchburg,	1 00

JOHN BROOKS, *for the Committee.*

TOWN TEAMS.

The Committee on Town Teams have attended to the duty assigned them, and report as follows:

Your Committee were unable to find but one entry of Town Teams, that one from Leominster, by C. C. Boyden.

We award Leominster the 1st premium, $30 00

The Committee desire, also, to make honorable mention, and recommend a gratuity of $5.00 to Reuben Vose, Jr., of Winchendon, for 3 yoke of very fine oxen exhibited, and driven by hinself.

Your Committee in making the above report regret exceedingly to find so little interest manifested among the farmers of the several towns belonging to the Worcester North Agricultural Society, in the exhibition of their working oxen. The most serviceable of animals and best friends of the farmer, are his team of working oxen. They are always ready to do the work assigned them, and do it well.

The committee feel that this branch of the exhibition should not be suffered to die for want of competition.

We commend and honor the Town of Leominster for their enterprise in bringing forward for exhibition a string of 18 yoke of noble oxen, a fine Town Team, all of which were in good working condition.

The committee are not ignorant of the fact that towns remote from the place of exhibition labor under disadvantage in getting up a Town Team. Farmers are not all willing to let their teams go to be driven so far as they would have to be in going to and from the Fair Grounds. This objection is not valid in all the towns, some of which are as near the Fair Grounds as Leominster.

Your committee, one and all, do most sincerely hope to see more life and animation among the farmers of the various towns in getting up Town Teams and bringing them forward for exhibition, and competing for the premiums offered by the Society, and not letting this very important part of the annual Show die out. A little more energy and spirit is all that is needed; if speed was requisite and to be considered, we might expect a lively competition from some towns that now manifest very little, or no interest in the matter.

For the Committee,

ESTABROOK MOORE, *Chairman.*

FOOT RACE.

Your Committee submit the following as their report on the Foot Race. There were four entries each day. Time, Sept. 27th, 2 min. 29 sec.

1st prem., Sept. 26th, to	Herbert Manning, Templeton,	$10 00
2d " "	Francis McCushing, Fitchburg,	6 00
1st prem., Sept. 27th, to	Herbert Manning, Templeton,	10 00
2d " "	Francis McCushing, Fitchburg,	6 00

JAMES DALEY, *for Committee.*

GENTLEMEN'S DRIVING HORSES.

The Committee on Gentlemen's Driving Horses award as follows:

1st prem. to	Warren W. Shattuck, Fitchburg,	$10 00
2d "	G. N. Proctor, Fitchburg,	5 00

WARREN SIMONDS, *for Committee.*

MATCHED DRIVING HORSES.

The Committee on Matched Driving Horses (one only of the original committee being present,) have attended to that duty and report as ollows:

1st prem. to	Alvah Crocker, Fitchburg,	$10 00
2d "	L. B. Willard, Ashby,	5 00

Five Pairs Horses were presented.

DANIEL PUTNAM, *for the Committee.*

FAMILY HORSES—SINGLE.

The Committee on Family Horses Single, make the following awards:

1st prem. to	G. N. Proctor, Fitchburg,	$6 00
2d "	N. C. Boutelle, No. Leominster,	4 00

WM. WOODBURY, *Chairman.*

COLTS.

The Committee on Two and Three-years-old Colts, submit the following report:

GELDINGS.

1st prem. to	J. H. Marshall, Leominster,	$10 00

FILLIES THREE YEARS OLD.

1st prem. to	A. S. Jefts, Fitchburg,	10 00
2d "	Joseph Marshall, Leominster,	5 00
Gratuity to	Lyman Nichols, Fitchburg, for 3-years-old colt,	3 00

COLTS TWO YEARS OLD.

1st prem. to	Lyman Patch, Fitchburg, for Stallion,	6 00
2d "	M. S. Heath of Lunenburg, for Gelding,	3 00

FILLIES TWO YEARS OLD.

1st prem. to	Lyman Nichols, Fitchburg,	6 00

JOSIAH PUFFER, *for the Committee.*

STALLIONS.

Your Committee on Stallions have attended to their duty and have awarded as follows:

1st prem. to	E. F. Perkins, Wilton, N. H.,	$10 00

GEORGE DAVIS, *Chairman.*

MARES AND SUCKING COLTS.

The Committee on Mares and Sucking Colts make the following awards:

1st prem. to James Hannegan, Fitchburg,	$4 00
2d " James Marshall, Leominster,	3 00
Gratuity to M. S. Heath of Lunenburg,	2 00

AUGUSTUS GATES.

DRAUGHT HORSES.

The Committee on Draught Horses report as follows:

DRAUGHT HORSES—PAIRS.

1st prem. to J. P. Putnam, Fitchburg,	$6 00
2d " D. F. McIntire, "	4 00

SINGLE.

1st prem. to F. H. Arnold, Fitchburg,	5 00
2d " Emroy Farmer, Harvard,	3 00

DENNIS FAY, *Chairman.*

HORSES FOR SPEED.

The Committee on Horses for Speed, would report that, in the trial of Tuesday, Sept. 26th, for the purse of $150, the premiums were awarded as follows:

1st prem. to J. S. Woodward, for "Jennie Chandler,"	$100 00
2d " L. P. Comee, Fitchburg, for "Clinton Maid,"	35 00
3d " H. A. Hatch, Fitchburg, for "Corporal Trim,"	15 00

On Wednesday, 27th, for purse of $100:

1st prem. to H. A, Hatch, Fitchburg, for "John Morrill,"	60 00
2d " L. P. Comee, Fitchburg, for "Clinton Maid,"	25 00
3d " Geo. Davis, Shirley, for "Phil,"	15 00

For the purse of $250:

1st prem. to J. S. Woodward, for "Commodore Nutt,"	175 00
2d " H. A. Hatch, Fitchburg, for "Corporal Trim,"	50 00
3d " L. P. Comee, Fitchburg, for "Trifle,"	25 00

FRANCIS BUTTRICK, *for the Committee.*

MECHANICS AND MANUFACTURES.

Your Committee find it impossible with the sum placed at their disposal to do justice to all the competitors for premiums. Many articles that are worthy of a premium can only receive honorable mention, and such premiums as are awarded must of necessity be small and insignificant. This is owing to the great increase of articles offered over the same class in previous years.

This part of the Exhibition was a decided success, and a very attractive feature of the Fair, affording to our people an opportunity never before enjoyed, of witnessing a large gathering together of the varied inventions and manufactures for which this locality is so far-famed. The space occupied by this department consisted of one room 50x100 feet and a temporary building 25x60 feet, having two lines of shafting, one 63 feet and one 75 feet long. This shafting was furnished by the Rollstone Machine Works. It was made in lengths of 9 feet and connected together by Porter's Patent Coupling, which is one of the cheapest, strongest and most convenient contrivances for the use, yet invented, and is particularly adapted to places where frequent change of pulleys is desirable. The Motive Power was furnished by the Union Machine Co., and consisted of a Portable Engine of 15-horse power, of excellent construction, which did its work to the satisfaction of all, and showed that our friends of the Union who build the Model Steam Fire Engines also know how to build a Stationary or Portable as well. The Belting was furnished by Wright, Woodward & Co., and was some of Page's best Patent Tanned, than which there is no better.

The Union Machine Co. had upon exhibition one of their patent improved Jucket Steam Fire Engines which came out conqueror in the trial which was conducted upon an entirely new plan calculated to show the vital force and real stamina of these most excellent machines.

In connection with this machine was a splendid Hose Carriage which for strength combined with artistic beauty, is the most perfect success it has ever been our pleasure to witness. This Jucket Engine is so arranged that should either of its pumps get disabled the other can be used independently. It also has vulcanite valves which cannot be destroyed by any grit which may pass between the valves and their seats. There is also connected with this boiler a novel arrangement of pipes and flues by which a peculiarly even pressure of steam is maintained. This Company also had on exhibition a very fine collection of finished parts of machines showing the thoroughness of finish and strength which is combined in them. They also exhibited a fine Stave-Sawing Machine as a specimen of their workmanship in this direction.

The Fitchburg Machine Co. of this town, exhibited some very fine specimens of Iron Working Tools which were manufactured especially for the Haskins Pneumatic Alarm Co. This collection consisted of an Upright Drill, a Compound Planer and a Screw Cutting Engine Lathe. These Tools, as well as all others of their manufacture, are models of neatness and simplicity and are manufactured from new and

improved patterns. Special care has been observed so to proportion their parts as to secure the greatest strength of metal and durability of the machines. Stock of *superior quality* only is used and the workmanship is first-class in all respects. All their finished parts consist of graceful curves and are entirely free from *fussed up* beads and sharp corners, rivalling in these respects the celebrated Whitworth Tools of England. This Company has taken a long step in advance in the improvement of these classes of tools. Their Lathes are nearly all provided with both lateral and cross power friction feed, both of which have new and very valuable features. Their Planers have many desirable improvements combined with an enormous amount of weight of iron. Their Upright Drills are very convenient and have S. C. Wright's Patent Friction Feed, which is one of the best inventions of this class that we have ever seen. All of these tools are furnished with patent self-oiling countershafts. The productions of this establishment should be seen by all who contemplate purchasing in this line.

Chas. D. Moore & Co. of Lawrence, had on exhibition one of their Revolving Blade Scroll Sawing Machines which is a novelty in its class and apparently a very desirable improvement. This invention rotates the blade of the saw perpendicularly to the surface of the table. This is accomplished while the saw is reciprocating so as to obviate the turning about of the piece of wood or other material while being sawed, the saw itself being made to conform to the curvature of the pattern instead of making the outline conform to the direction of the saw. This machine will be found to be a desideratum in shops where a lack of room prevents the desirable working of other kinds of Jig Saws. This machine is got up in very excellent style, is very ornamental and added largely to the attractiveness of the Fair.

The Burleigh Rock Drill, of which we have heard so much but which we have not often had an opportunity of seeing at work, made a very creditable exhibition of itself at this Fair where it was in full operation. This is a Fitchburg invention which has made successful—we had almost said possible—the great work now in progress at the Hoosac Tunnel. This machine is convenient, easily handled, not liable to get out of order, and, by competent judges, is said to be in every respect the most practical Drilling Machine ever invented. It will drill from two to six inches per minute, according to the hardness of the rock—striking from 250 to 500 blows per minute—and is worked either by steam or compressed air. At the Hoosac Tunnel air is used, which is conducted in flexible pipes and serves the double purpose of working the drills and ventilating the Tunnel. One of these machines is said to perform the labor of twenty men at one-third the expense. A peculiarity of this machine is that it drills a round hole, whereas hand drill holes are in form like an equilateral triangle with the corners and sides slightly rounded.

The Union Stone Co. of Boston, exhibited a large collection of their Emery Wheels and Stones and Grinding Machines, a goodly number of which, we are pleased to learn, they disposed of in our midst, showing that these productions were fully appreciated by our manufacturers.

The ingredients composing these stones are chemically united, forming a stone of great strength, and far better than the stones the particles of which are simply united in what is known as a mechanical mixture. Their grinding machines are gotten up in a very convenient form and are adapted to the sharpening of saws, and innumerable other uses.

Mr. L. D. Wheeler had upon exhibition a large collection of his newly-invented Fan Blowers, which almost equalled, as far as blowing was concerned, the Pneumatic Alarm Co's collection, the main difference being that while the horns were doing their work with a deal of vociferation, the fan was blowing most furiously and in the most noiseless manner. This Fan certainly equals, in nearly every respect, and exceeds in some, the celebrated Sturtevant Fan, which is now considered the standard of excellence. This invention is also a Fitchburg affair, and, after hoeing a hard row, is now beginning to be appreciated. This collection also contained some Washing Machines and other inventions which are working their way into public favor.

Mr. Knight of Hillsborough, exhibited a Window Fastener, for fastening either the top or bottom sash of a window in any desired position, and securely holding it from being moved either up or down from the outside of the house. This should be seen by persons in want of window fastenings.

Mr. M. Bowker, formerly of this town, had upon exhibition a newly invented Tobacco Cutter of great power and of excellent design.

Clement & Hawkes Manufacturing Co. of Northampton, exhibited an ingeniously gotten up Belt Clamp, unlike any which we have ever before seen. We have all been content to use the old-fashioned wooden clamp and we do not remember having seen any other effort in this direction. This we should judge to be a very convenient appliance for the use intended.

The collection of Cement Pipe exhibited by A. C. Kinney of Fitchburg, was superior in point of finish to any we have before seen, and he claims a superiority in his construction of the joints, which are very easily and strongly fastened together. The inside finish of these pipes is remarkable for its peculiarly glossy surface.

L. W. Merriam of this town, showed a new style Roofing Bracket which is a late invention and is the best thing of this kind that he has yet produced. This is made of malleable iron and is cast all in one piece. The arrangement for attaching this bracket to the roof is very simple, convenient and efficient. Mr. Merriam seems to be the only man who has produced a good invention in this line.

This town is not noted for its cooperage, but the beautiful handiwork exhibited by F. G. Kinsman, on this occasion, demonstrates that he is master of his business. Mr. Kinsman is a young man of merit and deserves the patronage of our people who desire anything in his line.

J. M. Marston of No. 6 Tabor St., Boston Highlands, exhibited, to the full satisfaction of all interested, a new Foot Power arranged for running a circular saw. This consisted of a very heavy balance wheel moved by a treadle, the balance wheel having upon its periphery a tooth gear which fits into a toothed arbor upon which are placed saws,

cutter-heads, emery wheels, or any small tools which it is desirable to use. This would be a very valuable machine in shops where other motive power could not be had.

Mr. George A. Henry had a beautiful miniature Steam Stationary Engine of about one-fifth horse power, which was driven by steam that was conducted through a $\frac{3}{8}$ pipe from the main boiler some 60 feet distant. This attracted large numbers by the beauty and neatness of its finish and the rapidity and stillness of its working.

A. McAllister showed, to the evident satisfaction of all who had the pleasure of examining his improved Mitre Box, that he had reached the desideratum in this invention.

The New England Machine Co. have recently brought out a beautiful design for an aquarium. They had two of them in full running order, containing a few handsome brook trout.

A. D. Waymoth & Co. had upon exhibition one of their improved Wood Turning Lathes, designed for turning all sorts of small work, such as tassel moulds, sleeve buttons, wooden jewelry, rings, pill boxes, and, in fact, nearly every conceivable form. They have built these Lathes upwards of 14 years, and have lately secured an extension of their patent. This Lathe furnishes the most rapid method of turning small wooden articles yet invented, and hand work cannot stand before such a machine, either in rapidity or nicety of product. These machines are made in the best and most durable manner, and are sold at a price so low that no wood turning establishment can afford to be without them.

Charles Fessenden had in this department a very neat "Concord" wagon.

Edwards & Stockemer, of Fitchburg, showed a specimen of their work in the way of a light Express Wagon, which was a model of beauty combined with strength. The painting upon this vehicle was decidedly good.

George Tisdale of Leominster, amused a large assemblage of people, especially the ladies and children, at his table, where he was busily engaged in Glass Blowing, to the great enjoyment of all who had the satisfaction of seeing him.

Messrs. Dow & Starbuck had upon exhibition a very large variety of Heating and Cooking Apparatus, consisting of ten Stoves and one Furnace. A very prominent feature of this collection was the celebrated Peerless Cooking Stove, which took the gold medal at the Paris Exposition in 1867. This Stove, so far as finish is concerned, is the most wonderful specimen of workmanship in this line which we have ever seen, and Stoves of this make which are put upon sale, though not so elaborate in outside finish, are still, marvels of neatness, while all their working parts are exact duplicates of this beautiful Stove, having been cast from the same patterns. They also exhibited their New Peerless Furnace, which is said to contain more valuable points than any other Furnace yet offered to the public. This Furnace possesses an unusually large amount of radiating surface, is very strong

and durable in construction, and is adapted to low cellars, and has the additional merit of cheapness in price.

We examined the collection of Stoves belonging to Geo. B. Knowlton, of Fitchburg, with a good degree of pleasure, and although sickness prevented his making the display which he desired to, we are convinced that the collection which he exhibited had many excellent points of merit. Their castings were beautiful in finish, excellent in design, and are said to combine all the valuable requisites of the best inventions in these directions. His Radiant is a beauty, and our wife says they are handsome, and she wants one. Mr. Knowlton also exhibited a splendid collection of Hardware in the upper hall, which was decidedly attractive.

Among the collection of W. E. Henry & Co., of Fitchburg, was the celebrated American Cook Stove, which received twenty-one First Premiums in 1870, and also took the First Premium at the late New England Fair at Lowell. This result could only have been achieved by a meritorious invention. Their collection also embraced the Hot Blast Oriental, which has a double radiator in its base, and is a good thing for cold feet in cold weather. Another improvement possessed by this Stove is, its heating or baking oven, situated upon its back. These Stoves are very ornamental.

Messrs. Brown & Libby, of Lowell, showed a Shingle Planer, which promises to give us again the old shaved shingle which used to last forty or fifty years, and at a cost but a mere trifle, if anything, above that of the common sawed shingle. It produces shingles of even thickness, true taper, and a superior finished surface, and, it is claimed, at the rate of twenty or thirty thousand per day. It is certainly a very valuable invention.

John B. Farnsworth showed a new Steam Trap for removing water condensed in steam pipes. This Trap is automatic, and seems to do its work well.

Haskins Pneumatic Alarm Co , of Fitchburg, exhibited a very novel and extensive assortment of Alarms for light-houses, sailing vessels, detection of leaks in ships, factory signals, railroad flag-men, police officers, and indeed for almost every purpose that needs an alarm or signal.

One large machine, rocking back and forth, was designed for light-houses, reefs, etc., and produced first a shrill whistle, and then a horrible bray, which could be heard for miles.

A pair of neatly designed and finished machines, operated by a crank-wheel, one furnished with a horn, and the other with a whistle, are for use on board vessels in fog, or in a factory, or shop requiring a signal, operated by compressed air, which is the medium employed to produce the sound in all the Alarms.

One small upright hand pump was the author of a dying wail through a flexible tube, which was sufficiently piercing to penetrate the thickest fog London ever felt.

Several fancifully decorated and tasty instruments exhibited, were also for use upon sailing vessels in thick weather, to warn approaching vessels, and lessen the large number of casualties at sea, and, besides

saving the breath of the operator, they are far more powerful than those horns sounded by the mouth.

Flags for railroad crossing men were shown, which, when induced, gave forth a sharp sound of warning of the approaching train. Whistles put in operation by the foot, and many other instruments of sound were displayed.

In addition to the numerous Alarms, the Co. had one of George F. Blake & Co's large Steam Force and Fire Pumps on exhibition, and also furnished a smaller one for feeding the boiler, aquariums, etc., they having lately entered into the manufacture of this celebrated and excellent pump. A better working pump was never exhibited than the one quietly forcing the water (from the artesian well sunk near the spot) into the boiler, against the ninety pounds pressure of steam per square inch, and at the same time mildly feeding the noble trout in the aquariums, and giving drink to the thirsty Burleigh Drill. Besides the manufacture, the card over the pump informed that the company turn their especial attention to repairing steam pumps of all makes. Certainly their exhibition was a good one, and the committee acknowledged its appreciation by a handsome gratuity.

In passing through the hall, it was our pleasure to come suddenly upon a shoe manufactory, in full working order, and, upon inquiry, we found that our friends, E. M. Dickinson & Co., had removed some of their famous Pegging and Sewing Machines down to the Fair, in order that the public might see the process by which the soles of shoes are sewed and pegged by machinery. These machines are perfect wonders, driving from 700 to 800 pegs, and making from 300 to 400 stitches per minute, and doing their work in the most perfect manner —actually driving pegs better than can be done by hand, because every peg is driven home, without being broken.

The New England Machine Co. had upon exhibition one of their new Pattern Planers, upon which they claim many important improvements. One of these is an improved cap, or bonnet, for protecting the rolls from clogging with shavings, which causes indentation upon the stock while being planed. This is a desirable feature in such a machine, and one which will be appreciated. We understand that this same machine is now upon exhibition at the Fair of the American Institute at New York. We wish our friends much success in its manufacture.

The Rollstone Machine Works, which are noted for the large variety and excellent quality of their wood-working machines, had, upon this occasion, a very fine collection, embracing one of their Patent Wardwell Sawing Machines, a Band Saw, a Planer, and a Gauge Lathe with Kilburn's Patent Shave Knife attachment, and one of their Flint's Patent Self-setting Saw Mills.

The Wardwell Patent Saw Bench is well known. They have made several hundred of them, and they are running in nearly every part of the world. This Machine carries two Saws, (a cutting-off and a splitting saw) in a swinging frame. They are so arranged that each can be instantly changed for the other, and can be instantly set for cross-

cutting or grooving, rabbiting or splitting upon any angle desirable, and all its work is done in the most perfect manner.

This Machine is said to be equal to the fourth man, in a pattern or cabinet shop, where three men are employed. Next came their improved Band Saw, with its Steel Belt Saw, running nearly one mile a minute. This Machine, for many kinds of work, takes the place of a Jig Saw, and will do the work of nearly six such machines. This Machine has many improvements which are very desirable. Among them may be mentioned an arrangement for lubricating the back edge of the Saw, thereby preventing the great wear which is so troublesome in most machines of this nature. They have, also, the table so arranged that it can be tipped and set at any inclination desired for sawing all sorts of bevels.

The operator is also protected from injury by the breaking of saws, by suitable guards or shields arranged over the path of the saw. Next came their Patent Chair or Gauge Lathe with Kilburn's Patent Shaving Knife attachment. This lathe was in charge of Mr. L. Brown, who turned a large number of handles for a lamp chimney cleaner, of which pattern he has made over thirty thousand and has nearly as many more to make. It is enough to say of this machine that it does its work in every way superior to, and much faster than hand work, doing nearly the work of six men and finishing the surface in the best possible manner. For nicety of finish, the work which this lathe produces is in advance of any we have ever seen.

Next came the Revolving Bed Planer, of which we are informed there are nearly fifty running in this vicinity. This is a very valuable machine and this company have succeeded in bringing it to a great degree of perfection. Some of these machines have planed a thousand feet of boards in eleven minutes and have done their work in a very creditable manner. These machines have their solid Three Knife Steel Cylinder for which a patent is now pending, an improvement which is found upon no other machine. They are also arranged so as to entirely obviate the difficulty of clipping the ends of the boards, by which upon most machines a large amount of lumber is spoiled.

They had also upon exhibition one of their Patent Self oiling Pulleys, which run from four months to a year with once oiling.

Last, but not least, came their Flint's Patent Self-setting Saw Mill, and here space fails to allow us to do justice to this novel invention. Suffice it to say that it has a new method of clamping and securing the logs between powerful jaws; and when the log is in position, it will saw it all into boards without being turned, or going through any more preliminaries. This Machine took the Silver Medal at the late New England Fair at Lowell.

Among the articles considered worthy of a premium, your committee award the following:

To Burleigh Rock Drill Co., for 2 Drills,	$5 00
Rollstone Machine Co, for Flint's Saw-mill,	5 00

Rollstone Machine Co., Gauge Lathe,	2 00
" " Self-oiling Pulley,	1 00
New England Machine Co., for Wood Planer,	4 00
" " 2 Aquariums,	1 50
Haskins Pneumatic Alarm Co., for Pneumatic Machines,	5 00
Union Mach. Co., for Steam Fire Engine and Hose Carriage,	8 00
Fitchburg Machine Co., for Compound Planer,	2 00
" " Improved Upright Drill,	3 00
Union Stone Co., for Emery Wheel and Oil Stone,	1 00
C. M. Robbins, for specimens of Book-binding,	1 00
G. B. Knowlton, Hardware,	1 00
L. D. Wheeler, for Tornado Fan Blowers,	3 00
" " Washing Machines,	1 00
" " Broiler (grt),	25
Milton Bowker, for Tobacco Cutter,	50
E. F. Knight, for Window Fastener,	50
A. C. Kinney, for Cement Pipe,	1 00
G. A. Henry, for Model Stationary Engine,	2 00
L. W. Merriam, for Shingling Brackets,	1 00
Clements & Hawks, for Belt Clamp,	1 00
Charles Fessenden, for best exhibition of Harness,	4 00
W. H. Allen, best specimen of Fine Harness,	4 00
S. G. Frost, for Harnesses,	2 00
E.M.Dickinson & Co., Ladies', Misses' and Children's Shoes,	5 00
Pierce & Chapman, for exhibition of Boots and Shoes,	3 00
J. P Sawtelle, for exhibition Boots and Shoes,	1 00
Dr. T. Palmer, for best specimen of Dental work,	3 00
Lawton & Goodnow, for best Furniture,	3 00
W. H. Jewett & Co., for Pianos, 1st prem.,	6 00
Arlington Piano Co., " 2d "	4 00
Monroe Bros., for Egg Beaters and Apple Parers,	1 00
L. J. Brown, for Weed Sewing Machine,	2 00
Merrill Carlton, for Singer Sewing Machine,	1 00
Mrs. M. S. West, Wilson Sewing Machine,	1 00
Hiram Knight, for Clothes Drier (gratuity),	50
E. J. Marsh, for Knife Cleaner,	50
Mrs. C. M. Kelsey, for Wooden Ware,	1 00
Albert E. Whitney, for case of Jewelry and Watches,	2 00
W. E. Henry & Co., for New American Cook Stove,	2 00
" " Base Burner Stove,	1 00
Dow & Starbuck, for best exhibition of Stoves and Furnaces,	4 00
C. Fessenden, for Concord Wagon,	3 00
Edwards & Stockmer, for Light Express Wagon,	3 00
A McAllister, for Mitre Box,	1 00
Cook Bros., for Horn Jewelry,	5 00
C. D. Moore & Co., for Revolving Blade Scroll Saw,	2 00

CHARLES FESSENDEN, *for the Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee appointed to award the premiums of the Worcester North Agricultural Society, on Agricultural Implements, have examined those presented, and submit the following report:

MOWING MACHINES.

There were 5 Mowing Machines entered for premiums—one by the Buckeye Mowing Machine Co., Improved New model B. Mower; one Clipper Mower by J. H. Fairbanks; one by Walter A. Wood & Co., Iron frame Wood Mower. J. P. Hunter had 1 one-horse and 1 two-horse Sprague Mower.

We award the Buckeye Mowing Machine Co., $8 00

To J. P. Hunter, for his one and two-horse Sprague Mowers, 6 00

HAY TEDDERS

Two were presented—one by the Richardson Manufacturing Co. of Worcester, and one by J. H. Fairbanks of Fitchburg. These machines were alike in patent and structure.

We award to the manufacturers, the Richardson Manf'g Co., 3 00

HORSE RAKES.

Two were presented—Taylor's Patent by J. H. Fairbanks, and the Bay State Horse Rake by the Buckeye Mowing Machine Co.

We award to J. H. Fairbanks, for Taylor's Patent, 2 00

We also award to J. H. Fairbanks, for Hay Fork, 1 00
Also, to J. H. Fairbanks, for set of Haying Tools, 1 00

PLOWS.

We award to L. S. Webster, Northfield, for Gang and Single Plow, 2 00
To Charles G. Allen, Barre, for Lufkins Patent Swivel Plow, 5 00

One advantage of this plow is, its mould board is self-fastening and is unfastened by the foot.

We award to Charles G. Allen, for Lufkins' Patent Sled Brake, 2 00

To S. G. Frost, for best Team Harness, 5 00

To Buckeye Mowing Machine Co., for American Cider and Wine Mill, and for the Young American Cider and Wine Mill, 2 00

To Wright, Woodward & Co., for 1 Hay Cutter and 2 of F. F. Holbrook & Co's Swivel Plows, 2 00

To J. P. Hunter, for Horse Hoe, combining the qualities of a double mould board plow with those of the most approved horse hoes and cultivators, 2 00

Respectfully submitted,
SOLON CARTER.

FANCY ARTICLES.

The Committee on Fancy Articles make the following report:

They have awarded:

To Mrs. J. E. Gassett, Fitchburg, for Ottoman Cover,	$1	00
Sarah T. Howe, Sterling, for Affghan,	2	50
Mrs. C. S. Houghton, Leominster, Crochet Rug,		50
Mrs. Calvin E. Sawtelle, Fitchburg, 2 Bed Spreads,	1	50
Miss Abbie Bohonan, Fitch., Braided Mat and Drawn Rag Mat,	1	25
Mrs. M. S. Clark, Fitchburg, Drawn Rag Mat,	1	00
Mrs. H. B. Dyer, " Rug,	1	00
J. F. Kendall, " Quilt,		75
Mrs. B. W. West, " Ottoman Cover,	2	00
Mrs. George Woods, Leominster, Sofa Pillow,	1	00
Miss Ella T. Wright, " Pin Cushion,		75
Hattie D. Upton, Fitchburg, 2 Crotchet Sacques,		37
Mrs. Clarence Kenney, Leominster, 4 Worsted Tidies,		87
Mrs. Harriet Withington, Fitchburg, Drawn Rag Mat,		87
Miss Betsey Woods, Leominster, pair of Shell-work Hose.		25
Mrs. Johanna Kinsman, Fitchburg, 2 Crotchet Scarfs,		87
Mrs. George Woods, Leominster, 2 Tidies,		87
Jennie A. Goodrich, Fitchburg, Tidy,		37
Miss Ella Wright, Leominster, Tatting Work,		87
Mrs. George Woods, " Tidy,		37
Carrie Howarth, Fitchburg, 2 Lamp Mats,		25
Mrs. H. A. Dickson, Fitchburg, Cushion, Mats and Tidies,	1	25
Miss Ella Wright, Leominster, specimens of Fret work,		75
Sarah A. Mirick, Princeton, Tidy,		50
Hattie E. Miles, Fitch., Chair Back and Seat, and Toilet Set,		87
Mrs. M. E. Chipman, Fitchburg, Tidy,		25
Josie E. Carleton, " Lamp Mat and Tidy,		65
Nellie A. Wyman, " Case Bird's Eggs, 72 varieties,		75
Carrie J. Works, " Feather Chairs,		25
Clara Goodale, Lancaster, Knit Counterpane,		75
J. E. Monroe, Fitchburg, 4 cases of Insects,	1	50

Mrs. I. White, Ashb'm,	Shell Box & Hdk'f with transf'd work,		87
Mrs. M. Fox, Bib and Tidy,			65
Paul Greenwood, Fitchburg,	2 Stuffed Squirrels,		25
A. J. Woodbury, "	Collection of Lizards, etc.,		25
J. A. Pendergrast, "	Specimens of Corsets,		25
Mrs. E. J. Gerry, "	Hair Work,	1	00

The committee have instructed me to say that if a larger sum had been placed at their disposal they should in many instances have awarded larger premiums.

GILES H WHITNEY, *Chairman.*

FINE ARTS.

The Committee on Fine Arts make the following awards:

To Miss Helen F. Priest, Sterling,	coll. Wax Fruit and Flowers,	$4	00
Albert E. Whitney, Fitchburg,	exhibition of Pictures,	3	00
Miss Mary L. Dennis, "	Masonic Emblem in Wax,	1	00
Mrs. Clarence Kenney, Leom.,	Wax Cross and Anchor,	1	50
Mrs. B. W. West, Fitchburg,	Wax Autumn Leaves,		50
Mrs. J. M. Carpenter, Fitchburg,	Worsted Wreath,		50
Mrs A. C. Kinney, Fitchburg,	Worsted Wreath,		50

OIL PAINTINGS.

1st prem, to Miss Katie S. Burrage, Leominster,		4	00
2d " Miss Lydia A. Hadley, Leominster,		2	00

CRAYON DRAWINGS.

1st prem. to Miss E. M. Lowe, Fitchbnrg,		3	00
2d " Mrs. J. S. Barrows, "		2	00

PENCIL DRAWINGS.

1st prem. to Herbert Adams (12 years of age), Fitchburg,		2	00
2d " R. F. Rice,		1	00

GRATUITIES.

To Emma S. Miller, Fitchburg,	Water Color Painting,		50
A. M. Hilton, "	Crayons and Grecian Painting,	1	50
Harry Snow (9½ years of age), Fitchburg,	Oil Painting,		50
Abbie E. Conn,	Crayon, "Bonaparte's Retreat from Moscow,"		50
Louisa Knapp, Fitchburg,	Crayons,		75
Ella S. Wright, "	Crayon,		50
Jennie F. Colony, Fitch.,	Oil & Water Color Paintings,		50

L. H. BRADFORD, *Chairman.*

APPLES, PEACHES, PLUMS AND QUINCES.

The Committee on Apples, Peaches, Plums and Quinces, report as follows :

APPLES.

12 varieties of 5 specimens each :

1st prem. to C. C. Boyden, Leominster, *Harris on Insects.*

6 varieties of 5 specimens each :

1st prem. to	Geo. Woods, Leominster,	$2 00
2d "	G. P. Hawkins, Fitchburg,	1 50

3 varieties of 5 specimens each :

1st prem. to	Levi Kendall, Fitchburg,	1 50
2d "	John Kilgore, "	1 00

Best exhibition of 12 specimens Baldwins :

1st prem, to	C. C. Boyden, Leominster,	1 00
2d "	E. Graham, Lunenburg,	50

Hubbardston Non-such :

1st prem. to	Eph'm Graham, Lunenburg,	1 00
2d "	C. C. Boyden, Leominster,	50

R. I. Greenings :

1st prem. to	Dr. Jabez Fisher, Fitchburg,	1 00
2d "	Geo. Woods, Leominster,	50

Roxbury Russets :

1st prem. to	C. C. Boyden, Leominster,	1 00

GRATUITIES.

To	Wm. Emory, Fitchburg, for Apples,	25
	J. G. Day, Leominster, for Cranberries,	50

PEACHES.

1st prem. for best collection, to Porter Piper, Leom., *Harris on Insects.*

1st prem. for best dish, to Samuel D. Phelps, Fitchburg, 2 00

PLUMS.

1st prem. for best dish, to Ohio Whitney, Ashburnham, 1 00

QUINCES.

1st prem. for best dish, to	Charles Flagg, Sterling,	1 00
2d " "	Porter Piper, Leominster,	50

WM. B. HOSMER, *for the Committee.*

PEARS AND GRAPES.

It will readily be conceded by all that in fruit culture, the apple is the most important fruit cultivated in the New England States, but as that for several years past has proved a partial failure, much more attention has been given to the cultivation of the pear; forty years ago three or four pear trees were found in the garden of the wealthy farmer and frequently two of them would be seedlings bearing inferior fruit, but now nearly every mechanic's garden has a larger number in the little plot that surrounds his unpretending cottage, of the choicest kinds. The professional Pomologist now has acres of Pear trees in a single plot; in the territory embraced by the Worcester North Agricultural Society the pear crop the present season, has been abundant and of excellent quality, perhaps not surpassed in Worcester County.

The pear (Pyrus Communis) of botanists, is a near relative of the Prince of American fruits, the apple, (Pyrus Malus,) but like many families, differs in type of character; the apple is satisfied to live, thrive a long lifetime on common food, be useful in its day and generation with common attention paid it, while the pear is a gross feeder, on highly-seasoned, nitrogenous food, requiring constant attention to promote its growth and guard it from common enemies and those peculiar to itself.

The home of the pear was Syria, thence transplanted into Egypt, Greece and Italy, where it was cultivated and the best kinds named after the Emperors, as the Tiberian from the Emperor Tiberius; the Falernian and more recently, the Bergamot, formerly spelled "Bey," a Turkish Governor, and "Armond," a pear; it is supposed the Romans introduced it into England during their possession of that Island; the Paradise of Pear propagation for the last two centuries has been Belgium.

American Pomologists have produced the Seckel, Dix and others, unsurpassed, and are now rearing seedlings of much promise; being indigenous to the soil of New England and subject to its varied climate, we may hope for a new era in pear culture among us.

Probably more money has been worse than lost in this State and especially in Worcester County in the purchase, and attempts to propagate the pear than any other production since the delirious fever of "Morus Multicaulis."

In planting a pear orchard the first requisite is to select a soil naturally suitable to pear culture, good drainage, in a sheltered location from winds and storms, trenched or subsoiled down to a stiff loam and put into good tilth; next will be the selection of trees to commence an orchard, and the kinds best suited for home use or an adjacent market, that will ripen from July to the middle of the winter, which experience

has taught will grow and ripen good crops in Massachusetts soil and climate; for profit not over ten or twelve kinds should be planted; as dwarfs and half standards on quince have proved failures, select trees on Pear seedling roots; perhaps, a few kinds may be doubly worked. Head or prune back the shoots so as to form a symmetrical top, cleanse the bark of the Pearbark louse (Lecanium Pyri) and the scurfy Bark louse (Aspidictus furfurus) so that the young shoots shall not be covered with such parasites so soon as a bud swells into a tender shoot.

We say to planters, do not order trees from self-constituted tree agents roaming through New England with colored pictures of fruits, for it is a common practice of such to take orders of men ignorant of Pomology at certain prices for certain kinds to be delivered at some future time; the agent gets his hundreds or even thousands subscribed for, he then goes to some large nursery at a distance, contracts for certain rows of trees left standing after all the marketable trees have been culled out, takes them up, sits down with his order-book, labels his trees with such names as are ordered, delivers his trees, takes his money and that is the last seen of him, as he prefers a new field for the next operation; the buyer rarely detects the cheat, as most of the trees die; but, forsooth, should a tree live it will be some three or four years before the scurvy bush produces the first specimen, and the *buyer* finds he was *sold*. Planter, go to some honorable nurseryman, (for some such there are,) select your trees, see they are properly taken up, leaving as long a tap root as possible (for the Almighty made a tap root for a purpose) take the advice of the nurseryman, plant your trees and hold him responsible for quality of trees and kinds of fruit,—succeed, and enjoy a thrifty, fruit-producing Pear orchard, the fruit ripening in succession through the entire season, and of the best kinds that Massachusetts can produce, with as ruddy a bloom as Eve blushed when Adam first spoke to her in Paradise before she meddled with the fruit business.

The Committee on Pears and Grapes make the following awards:

PEARS.

12 varieties 5 each:

		Harris on Insects.
1st prem. to	Alvah Crocker, Fitchburg,	
2d "	A. B. Holden, Westminster,	$2 00

6 varieties 5 each:

1st prem. to	J. M. Twitchell, Fitchburg,	2 00
2d "	Dr. H. H. Brigham, "	1 50

3 varieties 5 each:

1st prem. to	Dr. Geo. Jewett, Fitchburg,	1 50
2d "	Walter Heywood, "	1 00

Best exhibition 12 specimens Bartletts:

1st prem.	to Alvah Crocker, Fitchburg,	1 00
2d "	Geo. S. Houghton, "	50
1st prem.	for Seckels, to Walter Heywood, Fitchburg,	1 00
2d "	" E. Graham, Lunenburg,	50
1st prem.	for Flemish Beauty, to J. M. Twitchell, Fitchburg,	1 00
2d "	" J. Pierce, Fitchburg,	50
1st prem.	for Duchess, to E. Graham, Lunenburg,	1 00
2d "	" Dr. H. H. Brigham, Fitchburg,	50
1st prem.	for Louise Bonne de Jersey, A. B. Holden, Westminster,	1 00
2d "	" " G. S. Houghton, Fitch.,	50
1st prem.	for Lawrence, to Dr. Geo. Jewett, Fitchburg,	1 00
2d "	" Alvah Crocker, "	50
1st prem.	for Beurre d'Anjou, to Dr. H. H. Brigham, Fitch,,	1 00
2d "	" A. Crocker, Fitchburg,	50
1st prem.	for Sheldon, to A. Crocker, Fitchburg,	1 00
2d "	" Dr. Geo. Jewett, "	50

GRAPES.

Best display of Native Grapes:

1st prem.	to E. T. Miles, Fitchburg,	5 00
2d "	Dr. Geo. Jewett, "	3 00

Best 6 clusters Israella:

1st prem.	to James Houghton, Lunenburg,	1 00
2d "	G. S. Houghton, Fitchburg,	50

Best 6 clusters Concord:

1st prem.	to Dr. J. Fisher, Fitchburg,	1 00
2d "	M. S. Heath, Lunenburg,	50

Best 6 clusters Delaware:

1st prem.	to M. S. Heath, Lunenburg,	1 00
2d "	Dr. T. Palmer, Fitchburg,,	50

GRATUITIES ON PEARS.

To Dr. J. Fisher, Fitchburg,	on Bartletts,	50
G. F. Nutting, "	B. Bosc,	50
J. B. Wood, "	Pears,	50
J. M. Sawtell, "	"	50
Dr. H. H. Brigham, Fitchburg,	Swan's Orange and Seckels,	1 00
B. F. Hall, Leominster,	for Pears,	50
G. S. Houghton, Fitchburg,	for Duchess,	50

GRATUITIES ON GRAPES.

To Dr. H. H. Brigham, for Foreign Grapes, 1 00
Gratuity to M. S. Heath, Lunenburg, for Blackberries, 50

JAMES BENNETT, *Chairman of Committee.*

FRUITS AND FLOWERS.

ASSORTED FRUITS.

1st prem. to Mrs. Geo. S. Houghton, Fitchburg, $2 00
Only one specimen offered.

PLANTS IN POTS.

1st prem. to J. M. Sawtell, Fitchburg, $2 00
2d " Jos. Jackson, " 1 00

NAMED PLANTS IN POTS.

1st prem. for best 3 named Plants in Pots, Jos. Jackson, Fitch., 2 00
2d " " " J. M. Sawtell, " 1 00

CUT FLOWERS.

1st prem. for best display Cut Flowers, to J. M. Sawtell, Fitch., 2 00
1st prem. for best 5 named Asters, to Mrs. Geo. S. Houghton, 2 00
1st prem. for best 5 named Dahlias, to J. M. Sawtell, Fitch., 2 00
2d " " " " 1 00
1st prem. on 5 best Verbenas, to J. M. Sawtell, Fitchburg, 2 00
2d " " " " 1 00
1st prem. on best pair Parlor Bouquets, to J. M. Sawtell, Fitch. 2 00
1st prem. on best pair Hand Bouquets, Mrs. G. S. Houghton, 2 00

Your committee have the pleasure to report unanimously on the awards as above.

M. T. GARDNER, *Chairman.*

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES, &c.

The Committee on Bread, Butter, &c., award as follows:

WHITE BREAD.

1st prem. to Miss Lucy Kilburn, Lunenburg, $2 00
2d " Miss Emma F. Kimball, Fitchburg, 1 00
3d " Miss A. Richardson, N. Leominster, 50

BROWN BREAD.

1st prem. to	Miss Lucy Kilburn, Lunenburg,	2 00
2d "	Miss A. Richardson, N. Leominster,	1 00
3d "	Miss Hattie Hayward, Fitchburg,	50

LUMP BUTTER.

1st prem. to	Mrs. S. G. Mirick, Princeton,	4 00
2d "	E. Bird, Leominster,	3 00

JUNE BUTTER.

1st prem. to	Nathan Caswell, Fitchburg,	3 00
2d "	T. S. Wood, Westminster,	2 00

SEPTEMBER BUTTER.

1st prem. to	Nathan Caswell, Fitchburg,	3 00
2d "	T. S. Wood, Westminster,	2 00

PICKLES.

1st prem. to	Mrs. A. P. Whitney, Lunenburg,	75
2d "	Mrs. A. J. Hubbard, Ashby,	50

JELLIES.

1st prem. to	Mrs. Wm. Woodbury, Fitchburg,	1 00
2d "	Mrs. G. S. Houghton, "	75

PRESERVES.

1st prem. to	Mrs. Wm. Woodbury, Fitchburg,	1 00

GRAPE JAM.

1st prem. to	Mrs. A. P. Whitney, Lunenburg,	25

CANNED FRUIT.

1st prem. to	Mrs. Wm. Woodbury, Fitchburg,	1 00
2d "	Mrs. G. S. Houghton, "	75
To Mrs. W. Wyman, for 2 cans of peaches dated 1867 and 1868,		50

HONEY.

1st prem. to	F. E. Cleaves, Fitchburg,	2 00

E. B. ROCKWOOD, *Chairman.*

ROOT CROPS.

Your Committee chosen on Root Crops and Cabbages have attended to their duty and submit the following report:

Whole number of entries five—one on Potatoes, by Cyrus Kilburn of Lunenburg; one on Carrots, by Ebenezer Bird of Leominster; one on Carrots by Lawrin Pratt of Fitchburg; one on Onions, and one on Mangel Wurzels, by Mr. Pratt.

POTATOES.

Cyrus Kilburn's Potatoes, on 1 square rod of ground, 86 lbs., equal to 3440 lbs. to $\frac{1}{4}$ acre. We award to him 1st prem., $8 00

ONIONS.

Lawrin Pratt's Onions, on 1 square rod, 248 lbs., or 4960 lbs. to $\frac{1}{8}$ acre. We award to him the 1st prem., *Harris on Insects.*

MANGEL WURZELS.

Lawrin Pratt's Mangel Wurzels, on 1 square rod, 211$\frac{1}{2}$ lbs., or 4230 lbs. to $\frac{1}{8}$ acre. We award to him 1st prem., 2 00

CARROTS.

Ebenezer Bird's Carrots, on one square rod, 326 lbs., or 6520 lbs. to $\frac{1}{8}$ acre. We award to him 1st prem., 4 00

Lawrin Pratt's Carrots, on 1 square rod, 174 lbs., or 3480 lbs. to $\frac{1}{8}$ acre, did not come up to the Society's standard weight.

Respectfully submitted,
EBENEZER BIRD, *for the Committee.*

Statement of Cyrus Kilburn.

POTATOES.

The crop of 1869, where my potatoes grew this year, was grass, for which no manure was used. In 1870 it was beans, to which there was applied 8 loads of manure per acre. The soil is reclaimed muck swamp. It never was plowed before 1870, and then was plowed 8 inches deep at a cost of $4 per acre. For the potato crop twelve loads of manure were put in the hill; value upon the field, $15. Planted, May 20th, in hills, 12 bushels per acre of Early Rose potatoes. Cost of seed and planting, $8 for the $\frac{1}{4}$ acre. The crop had no cultivation except cropping the weeds twice with common hoe; cost, $2. They were dug, Oct. 1st, with prong hoe, at a cost of $3.

Statement of Lawrin Pratt.

ONIONS.

The crop of 1869 was cabbages, which had 4 loads compost to the $\frac{1}{8}$ acre. In 1870 the crop was carrots, to which 4 loads of good manure was applied. The soil is sandy loam. It was plowed twice, 3 inches deep, for the onions, and then harrowed with a brush harrow. Cost of plowing and harrowing, $2. Four loads of compost were spread broadcast; value upon the ground, $8. $\frac{3}{4}$ lb. of Yellow Danvers Onion seed was sown in drills, April 17th. Cost of seed and sowing, $3.50. Cultivated three times with hoe and hand, at a cost of $9. They were pulled Sept. 16th. Cost of harvesting and storing, $5.

Statement of Ebenezer Bird.

CARROTS.

The crops of 1869 and 1870 were also carrots, to which were applied 3 loads of common barn manure each year. The soil is a sandy loam. For this year's crop it was plowed twice, the first time about the first of May, and the second just before planting, the last of May. It was then harrowed, ridged, and raked at a whole cost for preparation, of $1.50. The manure applied was three loads, plowed in; value upon the ground, $3.00. Sowed, May 25th, $\frac{1}{2}$ lb. Long Orange Carrot seed, in drills 18 inches apart. Cost of seed and planting, $2.50. The crop was hoed and wed three times at a cost of $5. They were harvested about the 1st of November, and I consider the tops worth enough to pay the expense.

Statement of Lawrin Pratt.

MANGEL WURZELS.

The crop of 1869 was grass, to which no manure was applied. In 1870 the crop was ruta bagas, which had 4 loads of compost. The soil is sandy loam, It was plowed twice, May 20th, and brush harrowed at a cost of $1. Four loads of manure were applied broadcast, worth $8. Sowed $\frac{1}{4}$ lb. seed, in drills, May 22d; cost, $1. Cultivated with hoe and hand twice, at a cost of $4. Pulled and cut off the tops, Sept. 10th; cost, $2.

SEEDLING POTATOES.

The Committee on Seedling Potatoes would report that only two specimens, by two competitors, were presented. Of these the committee took special care to investigate and ascertain their qualities as far as circumstances would admit; the specimens presented were cooked

at the same time with several other varieties and the comparison carefully made; the varieties they were tested with were the Early Rose, Early Jackson, Vt. Garnet Chili, the Excelsior, and others now in use; all of which we decided to be superior to those in competition. One of the specimens exhibited was a large red potato resembling the Garnet Chili; by the statement of the competitor, however, some of them white, others spotted with white. Although the last year of the trial, this potato was grown on dry soil or good corn land yet it had a strong taste of the ground and did not favorably compare with the Rose or Vt. Garnet Chili. The other specimen presented was a white potato resembling the Early Jackson, size medium; instead of opening mealy and floury like the Rose it had the opposite appearance, and in our judgment did not compare with the Jackson or Excelsior. Hence, the committee decided that as the prize offered was comparatively large the article presented for the prize should have a corresponding good quality, therefore the premium at present is withheld.

Now the committee recommend to the Society that the competitors cultivate the same varieties next year, on one-eighth acre more or less, and have them again for examination and in case they become worthy of a prize to the Society—to the public generally—it is but justice the competitor should receive it.

Respectfully submitted,

EPH'M GRAHAM, *in behalf of Committee.*

Statement of James P. Putnam.

These Potatoes which I offer you for premium were started from the ball in the year 1869, and the product planted again in 1870, and that product again in 1871, the result of which I now offer for premium. The yield the present year was two bushels. The first planting was in black loam; the second the same; the third on a gravelly loam on what I should call good corn land. The care was the same as ordinary field care. Some of the potatoes were white and some were red, some spotted. The size rather more than medium.

JAMES P. PUTNAM.

VEGETABLES.

The Committee on Vegetables would report as follows:

BEST COLLECTION OF KITCHEN VEGETABLES.

1st prem. to	G. S. Houghton, Fitchburg,	$7 00
2d "	E. Bird, Leominster,	5 00

To A. Crocker, Fitchburg, gratuity, 1 00
Lyman Nichols, " " 1 00
A. P. Goodrich, " " 1 00

GARDEN SEEDS.

2d prem. to Geo. Billings, Lunenburg, 3 00

COLLECTION OF POTATOES.

1st prem. to Nathan Caswell, Fitchburg, 2 00
2d " Alden Derby, Leominster, 1 00

MARROW SQUASHES.

1st prem. to E. T. Willard, Ashby, 1 00
2d " A. J. Hubbard, Fitchburg, 50

HUBBARD SQUASHES.

1st prem. to A. P. Goodrich, Fitchburg, 1 00
2d " Lawrin Pratt, Fitchburg, 50

PUMPKINS.

1st prem. to A. P. Goodrich, Fitchburg, 75

CABBAGES.

1st prem. to Lawrin Pratt, Fitchburg, 75
2d " E. T. Miles, " 50

CAULIFLOWERS.

1st prem. to A. Crocker, Fitchburg, 75

CELERY.

1st prem. to S. Sawyer, Fitchburg, 75
2d " Alvah Crocker, " 50

ONIONS.

1st prem. to E. T. Miles, Fitchburg, 75
2d " Thomas Upton, " 50

TURNIP BEETS.

1st prem. to A. Sawyer, Fitchburg, 75
2d " A. P. Whitney, Lunenburg, 50

ENGLISH TURNIPS.

1st prem. to Benj. Safford, Fitchburg, 50
2d " Jacob Haskell, " 25

TOMATOES.

1st prem. to	Jacob Haskell, Fitchburg,	50
2d "	Lyman Nichols, "	25

BEANS.

1st prem. to	Fred. Goodrich, Fitchburg,	50

SEED CORN.

1st prem. to	A. B. Damon, Fitchburg,	1 00
2d "	G. S. Houghton, "	75

GRATUITIES.

To	A. P. Whitney, Lunenburg, for Seed Corn,	50
	C. Kilburn, Lunenburg, for Melons,	1 00
	Geo. Billings, " Pop Corn,	50
	A. P. Goodrich, Fitchburg, for Turban Squash,	1 00
	J. P. Putnam, " "	50
	G. S. Pratt, " "	50
	C. H. Burnap, Ashby, for Potatoes,	50
	James McIntire, Fitchburg, "	50
	M. Willard, Ashburnham, "	50
	Franklin Nourse, Sterling, for Seed Corn,	50
	Thomas S. Boutwell, Mammoth Squash,	50

D. C. MILES, *Acting Chairman.*

GRAIN.

The Committee on Grain have awarded the following premiums and submit their Report as follows, to wit:

It appears that there has been a great falling off of competitors from former years in regard to growing corn, as well as the other cereals; whether this be a wise or unwise course for farmers in Worcester North to take has not thus far been very satisfactorily settled.

The whole number of entries made is seven:

One field Corn by Joseph Goodrich, Lunenburg.
" Luther Page, "
" Jas. P. Putnam, Fitchburg.
" Cyrus Kilburn, Lunenburg.
One field Oats by Luther Page, "
" Wheat by Cyrus Kilburn, "
" Rye, by Jas. P. Putnam, Fitchburg.

In determining the amount of corn grown per acre the following mode was adopted: an average square rod was selected from each field and the quantity thus taken was dried, shelled and weighed, Dec. 4th; the number of pounds from each square rod being multiplied by 160 was acknowledged to be the weight per acre of each field. For convenience, we here exhibit a Table giving the weight of ears, also that of shelled corn, shrinkage, &c.

The field entered by

	No. hills per sq. rod.	No. ears per sq. rod.	Wt. ears per sq. rod.	Wt. shl'd corn per sq. rod.	Wt. cob per sq. rod.	Wt. sh corn pr acre	No. bu. per acre.
Mr. Kilburn,	42	134	24	19½	4½	3120	55⅝
Mr. Putnam,	22½	83	24⅝	19⅝	5	3300	58 13/14
Mr. Page,	27½	147	38½	31½	6	5200	92⅝
Mr. Goodrich,	27	181	47½	41⅝	5⅞	6660	118 13/14
Mr. Kilburn's Wheat,				9		1440	26
Mr. Putnam's Rye,				12½		2000	35
Mr. Page's Oats,				15½		2480	77½

For further information in regard to the above fields the reader is referred to competitors' statements found on other pages of the "Transactions."

Hence, we award the following premiums:

FIELD CORN.

1st prem. to Joseph Goodrich, Lunenburg,	$10 00
2d " Luther Page, "	8 00

FIELD WHEAT.

1st prem. to Cyrus Kilburn, Lunenburg,	10 00

FIELD RYE.

1st prem. to J. P. Putnam, Fitchburg,	4 00

FIELD OATS.

1st prem. to Luther Page, Lunenburg,	4 00

It appears from the statements of the competitors that the average cost of growing an acre of corn does not exceed $35.00, and the value of manure and fertilizers about the same, making the gross amounts $70,00 and the cash value of the same $100.00. This question has received no small amount of discussion. One farmer who has been successful in growing corn feels quite sure that his field has not cost so much labor or manure as it would had he cultivated the same with Swede's turnips, and it is far the most valuable to feed to stock:

another experienced and scientific farmer will tell us—*has* told us—of the enormous amount of turnips taken from an acre of light soil by using a few loads of compost manure scraped up from the barn-yard and applying 4 or 5 cwt. of superphosphate; and from his own observation and experience it is much the best and cheapest feed for horses as well as for milch cows and working oxen; propably corn growing is the forte of the one and turnips that of the other. But where is the proof on either side? None has been shown. Having had some experience ourselves in growing both corn and turnips, having also gleaned pretty carefully from those of large experience, we venture to make a few figures showing the relative money value of each, also the comparative value of the other cereals, and the value of hay compared with other crops. Suppose we take the corn crop as the basis and we shall not come very far from the truth when we say that the cost of labor and manure for an acre of corn is the same in value as that of growing an acre of turnips; again, it is reasonable to suppose that a field that will produce 1000 bushels of turnips, or 25 tons=50,000 lbs., will give 80 bushels of corn, or 4480 lbs.=2¼ tons. The turnip abounds more in water than any other root. We have from the tables of Prof. Johnson, Agricultural College, as follows:—

	Wheat.	Rye.	Corn.	Turnips.	Mead.hay.
Water,	15	12	12	86	16
Starch,	42	40	40	7	4
Gum and Sugar,	9	14	6	2	12
Nitrogenous Substances,	15	13	17	1½	7
Oil,	2	3	9	½	3
Woody fiber,	15	16	14	2	50
Ash,	2	2	2	1	8
	100	100	100	100	100

Therefore we see by the above table, if it be correct, and there is no evidence that it is otherwise, that the milking and fattening properties of corn are to the turnip as 72 to 11, but we have 50,000 lbs. turnip to 4480 lbs. of corn, or 25 tons of turnips to 2¼ of corn; now 11 per cent. of the turnip—the other 89 per cent. being water, woody fiber, &c., and of no value—being multiplied by 50,000 gives 5,500 lbs. of turnip per acre of real money value, and by estimating the price of corn at $1.75 per 100 lbs., or 1¾ cents per lb, we have 5,500 lbs. at 1¾ cents=$96.25, to which add the value of the tops, estimated by growers generally from $3.00 to $5.00, and we have in round numbers, $100 as the value of the turnip crop per acre; and by the same reasoning we have the value of the corn, whole weight 4480 lbs., 28 per cent. being of no value, leaving 72 per cent. of valuable material, and this multiplied by the number of lbs. per acre, 4480,=3225 at 1¾=$56.43; now we suppose that an acre of land that will produce 80 bushels of corn will yield at least 2 tons of stover, which if well cared for is worth

(this year,) $40.00, which added, gives the gross amount $96.43, showing a slight difference in favor of the turnip.

If we assume 25 tons of turnips per acre, it is just to say that 30 bushels of wheat can be grown on the same or similar soil of equal tilth, at 60 lbs. per bushel,=1800. Five bushels of wheat usually will yield 1 bbl. flour, hence an acre at that rate would give 6 bbls. flour, at $10.50=$63.00, to which we add the value of the middlings, 600 lbs. at 1½ cts.=$9.00, also the value of the straw, 1 ton, $20.00, making in the aggregate, $92.00, being about as much less in value than the other crops as the cost of cultivation.

It is plain that Rye for soiling may be and is a profitable crop, as it can be grown and used at a season when we have nothing else. A piece of greensward that is run out for grass, plowed in August and manured with some fertilizer, as leached ashes or superphosphate, giving the young roots a strong foothold to withstand the freezings and thawings of winter, and an early start the following spring, if the season is favorable the crop is ready to cut by 20th of May or 1st of June, and the field may be cleared of this crop in June and another crop be sown or planted for soiling; when the second crop is removed, first of September, with another dressing of manure or some fertilizer, the land may again be in good tilth for another crop; thus two crops may be taken for soiling provided we replenish liberally with manures or fertilizers. The Rye crop we consider a profitable one where the soil is suitable, as the straw readily sells at nearly the price of good hay.

Another class of crops used for feeding, being the foundation of all others, is the grasses; these contain when made into hay some 14 or 15 per cent. of water; in the green state before drying, some 80 per cent. The dry part consists largely of woody fibre, say 50 per cent.; besides this there are valuable quantities of nutritious bodies, gum, sugar, oil, &c., to the amount of 26 per cent. in meadow hay; the amount in English hay not stated in the table.

The time of cutting has much to do with the nutritive value of hay; when the leaves and stems are green they contain large quantities of sugar and gum which as they ripen are changed into woody fibre, and every experienced farmer well knows that large portions of these are lost before they are fed; hence, after grass has attained its full size and height, it loses large portiens of its nutritious qualities by delay of cutting. It was a rule of the milk producers of Middlesex County, (Concord and Lexington), years ago, if harvesting the crop was delayed so late that the stalk above the upper joint could not be easily separated from the sheath, and the lower part of it become contracted and withered, the hay would not produce its full quantity of milk.

A question here presents itself whether it is more economical for the farmers in Worcester North to employ labor at the present high prices to hoe corn and grow roots, or to spread the manure that is produced from a given grass field, every year upon the same, and grow good Timothy and Red Top.

What has been said in relation to early cut hay, the same occurs in the straw of grains and corn stalks; if they are cut ten days before the

grain is ripe, their quality for feeding is greatly improved compared to what they would have been if cut when fully ripe. This, with the quality and quantity of grain, shows a double advantage of early cutting.

Careful experiments have shown, with regard to wheat, that when cut twelve or fourteen days before fully ripe, the grain not only weighs heavier, but actually measures more,—better in quality, producing a larger proportion of fine flour per bushel. When the grain is in milk, it has comparatively a small amount of woody fiber; nearly the whole is gum, sugar and starch, with a large per cent. of water. If cut ten or twelve days before fully ripe, the proportion of woody fiber is still small; but as the grain ripens, the thickness of the skin rapidly increases, at the expense of the sugar and gum; these, of couse, must diminish in a corresponding degree, and the quality of the grain is of course injured; and what is true of wheat, we may readily suppose is the case with other grain.

The remark is frequently made, that, to grow a good crop of any grain, or root crop, the first work of importance is, good work done with the plow. This, of course, is important, still, we believe another branch of farming—yet, however, in its infancy—underlies it, and that is, field drainrge.

We don't believe in the doctrine of the "old Scotch farmer," who said, "verily, I believe the whole *airth* should be drained," neither of being at the expense of following the views of some of our fancy farmers; that is, to undertake to drain dry land, for the sake of making it moist—which is really true. The question, then, comes, what lands need drainage? Every observing, thoughtful, progressive farmer, however young, may have noticed in his mowing fields what is known by the name of hand-pod, or five-finger; or fine meadow-grass, instead of our own good old Timothy, Redtop, or, in fact, any of these aquatic, water-loving grasses, indicates cold water at a short distance below the surface, finally, if we are suspicious of stagnant water near the surface, a pretty safe rule is to make a few shafts in the field, three feet deep or so, and note the rise and fall of water in the pools after a heavy rain or thaw, and in case the water leaves the pools in a day or so, it is evidence that the roots of plants will not be injured by stagnant water. But if water remains in the pools a foot or two deep till late in Spring, or midsummer, rest assured the roots of plants will suffer, unless the water be removed by underdraining; and what we mean by this is, a drain from three to three and a half feet deep, and completely covered. Drains left uncovered, are nuisances; although they draw off the water a few years, they become filled up from the falling down of earth on either side and other rubbish, and are again required to be cleaned out; otherwise they *don't* perform their office. Aside from this, either side of the ditch becomes a complete harbor for weeds, thistles, and other rubbish, thus losing the use of a strip of land at least half a rod wide the whole length of the drain. Another kind of drain that answers very well fof a few years is, to dump the stone into the ditch at random, and level off the field. This kind of drain was made by the

writer some thirty years years ago, but in fifteen years became worthless, and has since been relaid at about the same cost as at first; so we infer that either of the above methods are loose ways of farming. When drains are properly constructed, that is, with stone at the bottom from six to eight inches in diameter, and covered with good flat stone, leaving an aperture from six to eight inches square, and the remainder filled to within twelve or fifteen inches of the surface with small stone and earth, the water that falls upon the soil does not remain *in*, on on the surface, to stagnate, or run away over the surface, washing away the best of the soil; but gradually sinks down, carrying with it the fertilizing substances from the surface, for the nourishment of plants, and with with it we may say, gives air and warmth, both essential to the growth of plants. Under these new influences, the soil becomes dry and warm, and plants, as we have reason to believe, flourish, which would never grow on it to perfection, if they grew at all. It is a fact, too, that such soils resist drought better than before. And for the simple reason that the plants are better able to send down their roots in search of food, without ever finding anything poisonous or hurtful; every part is penetrated with air, and consequently drier and lighter. Such effects cannot be expected, however, the first year, in a wet, clayey subsoil; the change is gradual, but sure. We venture to say that large portions of manure, or fertilizers applied to cold, wet, clayey soils are not of so much value by fifty or seventy-five per cent., as on the same soil when properly drained.

We here suggest a method for growing a field of corn, on a piece of grass land intended for that purpose next Spring. Commence at once by drawing out manure from the barn cellar, and broadcast the same, until we have the required quantity for the field. Next Spring, have the field plowed at a proper time, and planted as soon as the season will permit, using a certain amount of bone meal, or superphosphate upon the surface, for the purpose of giving the seed an early start, and forcing the plant through June. We see no reason why a field of corn may not be grown at much less expense than the common way of drawing out the manure in the Spring, when "work drives," and when, perhaps, hay and labor are bought at high prices.

We have alluded to plowing, and what we would be understood by the term is, that the whole sod should be moved at a proper and uniform depth, and width;—the whole sod completely turned. But what observing farmer has not noticed plowing to be done "in this wise:"—in the first instance the implement used was one entirely unfit for the work, and perhaps the plowman the same, consequently, there will be places where the sod is cut fourteen or fifteen inches wide, and two-thirds of it turned, and the other one-third unmoved. Other places, the sod, perhaps, is cut for several feet from two to three inches deep, and again the point of the plow,or what should be the point, runs upon the surface as many more feet, and then plunges into the soil to the full extent, leaving the sod "tilted up" edgewise, to be levelled with the so-called plowing by the harrow. Now, it is clear to our minds that bad plowing cannot be remedied by harrowing, hoeing, or any other

field work, as there will be places in the soil that will not be moved; consequently, we find in the soil hard, sterile places that cannot be penetrated by the small rootlets of the plants. They work and struggle on for a while, but finally droop and die: so there is nothing gained; but much lost, by inefficient plowing. Therefore, it is hoped that the Trustees of Worcester North Agricultural Society will again put the plowing back into the fields, and not only offer prizes to men, oxen and horses, for good plowing. but to boys and steers also.

Every practical fermer very well knows. as a general rule, that soils should not be moved by the plow wnen wet; more especially so when the subsoil is clayey. After plowing; when the surface becomes dry and crumbly, the field should be harrowed, using "Shares Harrow" for the purpose of breaking the lump, and leaving a smoot, even surface.

The question is sometimes asked if plowing serves to enrich the soil. In answer, we reply that frequent plowing serves to produce a disintegration of the particles, and make the soil more porous; thus giving free admission of air into the soil, charged with moisture, as it serves as a fertilizer, and thus hastens the crop, which is frequently of much importance, especially to the market gardener, when he can have his crop ready for the market three days sooner. the extra price of his crop perhaps would amply remunerate him for plowing his lands two or three times; and so again by having a field of corn ready to harvest a week sooner, might save the whole field from being destroyed by an early frost.

A deep and thorough pulverization of the soil is neccesary to the germination of the seed, and the ready extension of the roots in the soil. If the soil is lumpy and coarse, and does not come in close contact wtth the seed, to keep moist, the seed *can't* germinate, the roots *can't* extend in search of food, nor can this food be prepared and transmitted to the plants, unless the soil is so pulverized as to permit the freo circulation of air and moisture through its interstices, and through its mass. As before stated, the air and dews being charged wlth elements of fertility, the more porous the earth is made, the more easily are these elements conveyed to the seed.

Generally, we believe that farmers do not use such care in selecting and planting seed as is necessary, and from this cause, and from having the soil so ill prepared to receive it that a very large per cent. does not germinate, and the part that does is of a half starved and sickly kind. In selecting seed of any of the cereals, if the grain is threshed by machines and the seed used for sowing or planting, we unquestionably get a large per cent. of half grown, shriveled seed, unfit for planting. By this mode of selecting seed, and having the soil half plowed and harrowed, we may expect to reap a half-grown harvest; but when the grain is lightly threshed by the flail, or only half the seed shelled out, to be used for that purpose, we may expect to have large, healthy, plump seed, such as will germinate and produce a full crop of grain, requiring no more labor, or manure, in the cultivation, than the poor, sickly, half-grown crop. Again, we believe that

small seeds are frequently too deeply planted; the seed, after being sown, requires air, warmth, and moisture, by which the seed undergoes some change, and on swelling, a young, tender root bursts forth from the shell, and, in obedience to the laws of gravitation, goes downward in search of food, while at the same time a stalk shoots up towards the surface, to form the plant. These small roots that first make their appearance, are fine and delicate, they move downward for food to nourish the young plant, hence the food for roots thus tender should be sweet and nutritious, and if it be not found, the plant droops and withers, perhaps dies; or if it be found only in small quantities, and of an insipid kind, it produces a poor, sickly plant; or, if the soil be hard and lumpy from bad plowing, and does not come in contact with the young roots, we have only a half-starved plant, or tree. Here again the importance of thorough plowing, and a deep pulverization of soils.

The question has again and again been discussed at Farmers' Clubs and elsewhere, in regard to the quantity of seed to be sown, or planted, upon a given quantity of ground. But, after all every farmer must be his own judge, as it depends upon many circumstances, such as the kind of soil, its tilth, pulverization, &c., and again, the quality of the seed. When the seeds are plump and healthy, and the soil well ploughed and well prepared, otherwise, a much less amount of seed should be used; as we notice in two of the competitors the present year in growing corn, while the competitor having the greater yield had the less number of hills per rod, or as nine to fourteen; the competitor having the greater amount of corn estimates the stover at about two tons, while the other judges he has from four to five; so that the gain of the one, or the loss of the other is not so great as at first appears.

For the Committee,

EPH'M GRAHAM, *Chairman.*

Statement of Luther Page.

CORN.

The crop of the field on which my corn was raised was grass in 1869, with no manure. The land was plowed in 1869 six inches deep, and planted to corn in 1870, with fifteen loads of good compost manure to the acre. The surface soil is mostly yellow loam, with clay subsoil.

It was plowed once this Spring, six inches deep, well harrowed, and furrowed three feet apart, one way only. The cost of plowing and other preparation was $7.50. Fifteen cords of good compost were spread, and a small handful of phosphate was put in each hill. The value of the manure for both seasons was $75.00. Planted by hand from the middle to the last of May, with Carter and Groton eight-rowed yellow corn. The cost of seed and planting, was $3.50. It was worked with culivator, twice, at a cost, including weeding and thinning, of $9.75. The most of the crop was cut and stooked, the re-

mainder topped about September 8th to 10th. Cost of harvesting, storing and husking, $9.00.

Statement of Cyrus Kilburn.

WHEAT.

The soil of the acre upon which my Wheat was raised, is a clayey loam. The crop in 1869 was grass, to which no manure was applied. In 1870, the crop was winter wheat, which had sixteen loads of barn manure. It was plowed twice, six inches deep, and the seed was washed and ashed before sowing. The cost of plowing and other preparation was $6.00. For the crop of 1871, twenty loads, thirty bushels each, compost munure, were spread and plowed in. The value of the manure upon the ground was $25.00. The seed (Blue Stem Winter Wheat) was sown the 20th of September. Cost of seed and sowing, $7.00. The crop was cradled the middle of July. Cost of harvesting and threshing, $10.00. The weight of straw was one ton, and of grain, 1440 lbs. The sowing was delayed a full fortnight, on account of extremely dry weather, which was very unfavorable for the crop.

Statement of J. P. Putnam.

RYE.

The soil on which my rye grew, is a gravelly loam. The crop of 1869 was corn, which had seventeen loads, thirty bushels each, of good manure, per acre. The crop of 1870 was oats, to which no manure was applied. After harvesting the oats, the land was plowed, in August, eight inches deep, and then harrowed, at a cost of $5 per acre. One hundred and fifty bushels leached ashes were spread, at a cost of $22.50 per acre. The seed was 1 1-2 bushels of White Winter Rye per acre, which, including sowing, cost $2.87. The crop was mowed and bound in July, at a cost, including threshing, of $12 per acre. The weight of straw was 3320 lbs., and of grain, 1960 lbs. per acre.

Statement of Luther Page.

OATS.

The soil on which my oats grew is clayey. The crops of 1869 and 1870 were grass, with no manure. It was plowed six inches deep the first week in May, 1871, and then thoroughly harrowed at a cost of $7.50. Twenty loads of rich compost manure were spread broadcast, worth upon the field, $40. It was sown on the 4th of May, with 2½ bushels of Black New Brunswick Oats. The cost of seed and sowing was $4.50. The crop was mowed August 11th, a large part of them being badly lodged a few days before cutting. The cost of harvesting and threshing was $12. The weight of straw was 4000 lbs., and of grain, 2470 lbs. per acre.

PEAR ORCHARDS.

If one would succeed in Pear-growing, he must not only have an interest *in*, but a desire and taste *for* it. Simply because Mr. A or Mr. B., or some other Pear-grower, by his study, perseverance and hard work has succeeded and acquired a livelihood by growing pears, it is no index that another individual will succeed by transplanting the best of trees in soil well adapted to their growth, without farther exertions on his part.

Therefore, we would say to the young farmer, or pear-grower, that the first matter of importance is suitable soil; and as far as our observation goes, we would avoid hungry, gravelly, or sandy soils. Low, sunken and swampy grounds are also to be excluded. We have noticed pears to make very good growth, and appear to do well on alluvial soils, for a few years, and then almort entirely fail. As a general rule, then, we would say, select a surface soil of black loam and clay, or clayey subsoil, which should be thoroughly underdrained, either naturally or artificially; and what we would be understood by thorough underdraining is, in case the subsoil is very tenacious, the drains should not be less than three feet deep, perhaps three and a half would be better, and at such distances that the water shall find easy access to the drains; for so sure as the roots of pear trees come in contact with stagnant water, just so sure is it death to the tree. A safe rule would be to make a few excavations in different parts of the field, to the depth of three and a half feet after underdraining and before transplanting. Carefully notice the rise and fall of water in the pits after heavy rains, and in case the water leaves the pits in a day or so, we conclude that pears may be put out with safety.

As it regards aspect, various views are entertained; many prefer a northern exposure, believing that they avoid the danger of late or Spring frosts injuring the blossoms; others choosing a southern, or south-western exposure. Our own opinion is, as far north as Worcester County, the field should have a southern slope, and protected from the north and north-west winds by buildings, or other trees. To shelter an orchard from prevailing winds, is often of more consequence than the aspect; for pear trees, when laden with fruit, will suffer more from heavy storms of wind than from late frosts. Hence, if no natural protection exists it is well to plant evergreens that are of rapid growth, such as pines, or Norway spruce, to guard that part of the orchard where protection is most needed. Perhaps a more economical way would be to transplant three rows of peach trees, the first row the same year the pears are put out, the others a year or two afterward. As peach trees are comparatively shost-lived, after the first row has done its work, new ones might take their places, and thus a new row transplanted as often as needed; thus always giving protection to the pear orchard by peach trees that would always pay the expense.

Varieties. It is well known to those even that have had only small experience, that the pear is capricious; this year it *will*, next, it *won't*, the same variety in the same soil. That a Flemish Beauty, or a Seckel

will be produced in perfection in one soil, while a mile distant, and in one of precisely similar appearance, they fail to be anything more than second rate, is a mystery that has puzzled those of large experience, and even mocked all investigation.

The same may be said, in some respects, in regard to the Apple. The writer says he can't grow the Rhode Island Greening on his soil, while just across the valley, at a distance of three miles, in soil apparently similar, it is grown almost to perfection.

In case we intend to grow Pears for profit, it is unwise to make it a point to grow ninety-nine varieties; as that practice has already, in many cases, proved a failure. Hence, decide in the first place the kinds best adapted to your soil, if possible. A member of this committee having tried a few varieties, and succeeded so well in growing both wood and fruit, has come to the conclusion that the kinds adapted to his soil are the Bartlett and Seckel, as standards, which should be set eighteen feet apart, and Duchesse between. In another locality, however, perhaps in the same neighborhood, the Belle Lucrative and Beurre d'Anjou, or the Lawrence and Sheldon, as standards, and the Bonne d'Jersey might excel the Duchesse.

Now, to remedy the evil of being at so much expense in planting trees, and in a few years being obliged to re-set with other varieties, a Farmers' Club should be formed in every town, and each farmer who intends to grow Pears set one or more of each kind of the different varieties, and notice the result, discuss the subject freely in regard to soils, varieties, locations, &c., and report the same to the meetings of the Club, and also to the County Societies. This would, in a few years, enable parties to make better selection of fruit, and much uncertainty that now exists would be avoided; and in this way, too, it would be ascertained, to some extent, at least, the kinds best adapted to particular soils and localities.

PLOWING AND CROPPING.

To succeed in growing Pears, deep and thorough plowing is of vital importance. Two years before transplanting, the field should be plowed at least an inch deeper than at any former plowing, and the subsoil plow should follow in the same furrow, as deep as circumstances will permit, and the field supplied with a liberal dressing of barn manure, and cultivated with some hoed crop. The succeeding year the field should again be plowed as before, that is, one inch deeper, and subsoiled as deep as practicable. By this operation, we deepen the soil some two inches; the field again being dressed with a supply of good yard manure thoroughly incorporated in the soil. This mode of plowing is expensive, we are aware, but labor is saved in the end, as it supersedes the necessity of digging holes for the trees, at the expense of about $60 per acre.

From our own personal observation, we are satisfied that with nothing short of deep plowing and a thorough pulverization of the soils, will the planter meet with success. The old adage is, "work once

well done is twice done," and so, the field properly worked is not prepared only for one or two years, but for a life-time. Now, if the soil can be loosened to the depth of eighteen or twenty inches or more, and we think in the majoriry of cases it may be, it should by all means be done; for, a hole dug in the earth, especially where the soil is of close texture, is a cistern; this being filled with fine loam, or compost, retains the water, and when it becomes stagnant, it has an injurious effect upon the roots. Hence the tree becomes less and less valuable, until it is the cause of absolute injury. If the hole is deeper than the rest of the field is loosened, the lower part of it will retain the water, and cause an unhealthy action upon the roots in it; but if the earth is loosened over the whole field as low as the bottom of the hole, the stagnant water will flow off.

SELECTION OF TREES.

In selecting trees for transplanting, an eye should be had to the diameter of the tree, instead of the height. Choose those that have made their last year's growth *stocky*, without regard to height; yet, when a nursery-man, or tree-peddler is making his yearly visits in taking orders, when inquired of in regard to size, he will at once speak of their great height, which, in our estimation, instead of being a very good recommendation, is a very weak one, and should not be regarded a safe rule by the planter. Trees of stocky growth, and well supplied with good roots, are of more consequence than long, slender stems, even with good heads.

MANURING AND MULCHING.

Says Mr. Quinn,—"There is no part of the work of Pear-growing so little understood as that of furnishing the proper kind of manure, and in the right direction. Young Pear-trees are often killed by over kindness in placing large quantities of coarse, strong, unfermented manure in the holes at the time of planting, and around the bodies of the trees. It should be distinctly understood that both of these practices are likely to be an injury to the welfare of young trees. It is admitted that unfermented manure of any kind should not come in contact with a young tree."

Says Mr. Barry,—"Every garden should have its manure heap in such condition that in the fall, or spring, when it comes to be used, it will cut like *paste*.' In that state only is it safe to apply it. All parts of it then are thoroughly decomposed; all seeds of noxious weeds are then dead, and it is in condition capable of yielding at once to theroots of growing plants healthy nutrition that will produce a *vigorous, sound and fruitful growth*, and this is precisely what is wanted; far better to have a young tree starved and stunted, than forced into a rank and plethoric growth with crude, ill-prepared manure. We presume that what the Pomologists would be understood to mean in this connection in regard to green, unfermented manure is, that it should not be used

in the holes at the time of planting. After this time we see no reason why green or unfermented manure may not be liberally spread broadcast on the surface. For the roots of young trees are not nourished by *eating* manure, but by *drinking in* of the liquid, after being filtered through the soil. We are of the opinion that the liquid portion of manure, after being drained through the soils, be it ever so green and unfermented, is in fit condition to be used as plant food.

Mr. Poor, of Somerville, says: "After twenty years' experience in growing Pears, I am satisfied that any reasonable amount of manure will not prove injurious to Pear trees three or four years old.

PRUNING TREES.

Mr. Downing recommends fall and winter pruning for fruit trees, without regard to kind. Although this may be regarded as high authority, yet our experience and observation controverts this theory. It has of late come under our observation in regard to the Pear, as well as the Apple, that a wound made in winter causes the limb to check, and usully "*dies down*" for some distance, thus producing a cavity between the wood and bark, and requiring a new cut to be made in April, or as soon as the sap begins to ascend, instead of a cavity being formed between the bark and wood, there was a protuberance, of bulging out of new wood, forming a ring between the bark and wood. A layer of gum-shellac, or thick paint, applied at the time the cut is made, serves to prevent checking, and hastens the growth, or protuberance of new wood.

For the Committee,

EPH'M GRAHAM, *Chairman.*

The Chairman of this Committee, Eph'm Graham, Esq., being himself a competitor for the premiums, did not act with the other members of the Committee in deciding upon the awards until they had unanimously decided to give him the first premium, and afterwards the whole committe decided upon the second premium, viz:.

For the best Pear Orchard of not less than fifty trees, all having been set after January 1st, 1866, we award to Ephraim Graham, of Lunenburg, the first premium of $25.00

To Geo. S. Houghton, of Fitchburg, second premium of 10 00

The Committee desire to speak in commendation of the Pear Orchard of Capt Amos B. Holden, of Westminster, who has shown great ability and success under adverse circumstances, in the cultivation of many varieties of this luscious fruit, and they regret that another premium is not at their disposal, that they might show their appreciation of his efforts in this direction. Still, they are of the opinion that he allowed too much fruit to remain upon his young trees, to ripen.

The town of Westminster, from its exposed situation, is not considered congenial to Fruit cultivation, yet Mr. Holden, in the opinion of one, at least, of the Committee, from his garden plat, must have gath-

ered more than one hundred bushels of pears, in good condition, and in the highest state of perfection, and among them some varieties not successfully cultivated in this part of the county.

L. H. BRADFORD.
J. A. MARSHALL.

FARMS.

The Committee appointed by the Trustees, in 1869, to award the Premiums of the Society for the best cultivated Farms for the years 1869–70–71, submit the following report:

That only two Farms were entered to compete for the Society's premiums; one by Daniel S. Eaton of Fitchburg, the other by Alden Derby of Leominster. These Farms have been visited by your Committee annually and inspected in their various departments, that we might have a general knowledge of their management. But the two farms are so dissimilar and require a management so unlike each other, that we shall be excused for entering more minutely into detail. Mr. Eaton's farm contains sixty acres and is well fenced with stone-walls, and is managed by his own labor, and when he finds it necessary to have some additional help, he exchanges and works for his help to pay them, so that no part of the income of his farm has to be appropriated to pay running expenses for labor, which circumstance is of very rare occurrence nowadays. He has unearthed the boulders and smaller stones from his fields, made the rough places smooth in his mowing lots, so that the Mower will run to advantage on all his grass lots, with a very small exception. He cultivates wheat, barley, Indian corn, potatoes, turnips, beets, and other vegetables, keeps his fields clean of weeds, keeps four or five cows, makes butter for the market, has an apple orchard, keeps swine, some for market, also about three dozon hens, selling one hundred dollars worth of eggs in a year, has pears, grapes and peaches, sufficient for his family use,

Living on "Alpine Hill," any one looking around from his standpoint might suppose him to be "monarch of all he surveys." We noticed a nice field of German Sweet Turnips growing beside Ruta Bagas; the Sweet Turnips are much more thrifty than the Bagas, showing a decided superiority over them, with the same culture. Also, we noticed this year a prolific field of the Common Flat Turnips adjoining the above.

We might go on and make an extended report of Mr. Eaton's farming operations; but his written statement accompanying this Report, will amply suffice.

Mr. Derby's Farm contains about one hundred and seven acres and is managed in a manner that requires much extra help. Mr. Derby is

reclaiming a large swamp, by ditching extensively, that is covered with bushes that "require more hands than his to lop their wanton growth." He raises potatoes for the early market, and cabbages, carrots, beets, the best for the market, the poorer qualities for his cows, about a dozen in number, that are kept for the sale of their milk. He has adopted the practice of soiling them. In the warm weather he lets them run a few hours in the pasture, then puts them in his barn and feeds them with green fodder, such as early cut rye, fodder corn, refuse cabbages and leaves, beet tops, &c., as they come to growth. We noticed two acres of winter rye sown for next spring's feed, two acres of fodder corn, two acres of cabbages, the best for market, the smaller heads and leaves for forage. By this method of feeding, he makes large quantities of manure to fertilize his fields which he has cleared of stones at a considerable outlay. He cultivates the strawberry and other small fruits, cuts about thirty tons of hay yearly, raises his own wheat for flour and often has many bushels for sale.

Your Committee called upon each of the competitors to make a written statement of their farming operations somewhat in detail. They have responded by submitting their statements to us. Their statements do not show us exactly a Cash Balance for their operations, which is a desideratum in *Farming accounts*. For example, Mr. Derby shows the number of tons of hay he cuts, but the hay is consumed to make milk and butter.

Accompanying this Report are the statements of the competitors which will render a more detailed report from us unnecessary.

We make the awards as follows :

1st prem. to Alden Derby, Leominster,	$50 00
2d " Daniel S. Eaton, Fitchburg,	25 00

All of which is respectfully submitted,

CYRUS KILBURN, *for the Committee.*

Statement of Alden Derby.

To the Committee on Farms:

GENTLEMEN: My Farm contains 107 acres. About 30 are in shape to cultivate; 20 acres pretty good pasture; 30 acres poor, run-out pasture producing but little feed, and 27 acres swamp, good for nothing at present for farm purposes. When I commenced here six years ago, I adopted "mixed" farming with stock and dairy taking lead. I was convinced that we could not depend upon our old pastures which had been cropped year after year by milch cows, without having anything returned to them, for a profitable supply of summer fodder for our stock. Two systems presented themselves for consideration; one, to plow, seed, mow two or three years, then pasture, then

plow again and go on as before. This would require the farm to be fenced off into fields. The other was soiling, by which I could save manure and dispense with cross fences. I chose the latter, to be adopted as soon as I could get my land into shape to warrant it. I have tried it the past season and like it. Here let me say, I think that on our dairy or milk farms, in this section where the greater part of the land can be plowed, soiling will be practised at no distant time.

Writers on soiling have recommended green corn to be fed exclusively in its season. I believe this to be a mistake. So far as my experience goes, cattle cannot be well kept for any length of time on corn alone. I would feed per day, three times green corn, once dry hay, once green oats, clover or cabbage, according to season. Next spring I shall begin to feed rye as soon as it is a foot high, then pasture while feed is good, then feed oats, corn, cob, &c., in the barn.

I have at present for stock, ten cows, seven heifers and calves, two oxen, a horse, about a dozen swine, &c. I raise my best heifer calves using Ayrshire to cross with Native. Have been using Essex swine to cross with Native; find them far ahead of anything ever had before. I raise potatoes, cabbages, winter wheat, rye, oats and corn for fodder, and a supply of garden truck for family use. Wheat in 1870 yielded thirty bushels per acre; in 1871 got winter-killed, cut it for hay.

This farm, like many others, had numerous stone walls running in every direction, without regard to order or shape of fields, of double and treble thickness, and lined with brush and briers. As soiling was my object, I have taken every opportunity to remove these and have nearly all the inside ones cleared off. I have cleared nine acres of old pasture, at a cost for plowing and getting out and drawing off stone, of from $75 to $100 per acre. I have now about thirty acres that I can cultivate. Believe in having land in such shape that it can be thoroughly stirred; first drained, either naturally or artificially, then thoroughly cultivated; then we get full benefit of our manure. Drainage, manure, thorough cultivation, are the three great things. I have made plans to drain my swamp and commenced, but no results yet, only a beginning. I shall use tile; have used stone to drain portions of upland, but it is too expensive, and withal unsatisfactory.

My gross receipts for 1870, were $2748.34; for 1871, $2736.82. Paid for labor, 1870, $706.62; for 1871, $920.71.

Finally, gentlemen, to fix up a run down farm, with poor buildings, without capital to start with, is up hill work, but to remove an old wall, to clear up a field of brush, to dig and blast out stone and make everything smooth, to drain a swamp producing nothing but brush, frogs, mosquitoes, snakes and all sorts of filth and slime, to make it produce three tons good hay per acre each year, has for me a peculiar charm which can be found in no other department of labor, and besides, it must pay in the long run.

I am truly yours,

ALDEN DERBY.

Statement of D. S. Eaton.

To the Committee:

My Farm, which was entered for premium in 1869, contains 60 acres; about 24 in mowing and tillage, 26 in pasture, and 10 in woodland. I cut, on an average, about twenty tons of hay, using Wood's one-horse mower on all but about one acre. I usually have some surplus hay to sell. I raise about twenty bushels of wheat annually, called Coffee wheat, and generally corn enough for family use and for fattening my swine. I have raised none this year, however, believing that when a ton of hay will buy a ton of meal, it is better to sell hay and buy meal.

Last fall I plowed $1\frac{1}{4}$ acres of greensward, and this spring put on about thirty loads of manure to the acre, harrowed and sowed $\frac{1}{2}$ acre with grass seed and barley, from which I threshed twenty-six bushels of barley. The remainder I plowed this spring, manured, and sowed 15 rods with Swedish turnips from which I raised seventy-six bushels. The rest I planted with Early Rose potatoes which yielded me ninety bushels. In June I broke up an acre of grass ground, manured and planted $\frac{1}{3}$ of an acre with fodder corn from which I raised a heavy crop. July 20th I manured and sowed English turnips on $\frac{1}{3}$ of an acre, and harvested twenty-five bushels. I cultivate garden vegetables enough for home consumption, and some for the market.

I keep four cows, a yoke of steers, two or three other young cattle, and one horse; also, about three dozen hens from which I sell about $100 worth of eggs per year. I feed them with refuse fish from the market, in addition to their otner food.

I commenced, after haying in 1869, to ditch and level about an acre of rough mowing, plowed the knolls, took out the stones and left it on account of heavy rains. In August, 1870, I finished ditching and leveling, spread on a coat of manure and sand and seeded to grass. This year I cut two heavy crops from it.

I have removed boulders enough from my fields to lay about 20 rods of wall, and as I had no place of my own to build, I gave them to my neighbors. I have taken out the last stone that was in the way of the mower. As I have no muck, I use sand instead mixed with manure, and think it works well on most of my clay-bottom land. I hire no help, but do my own work by exchanging with neighbors.

My gross sales for 1869 were $423.30; for 1870, $801.94; for 1871, about $400.00.

Respectfully yours,

DANIEL S. EATON.

COMMITTEES' REPORTS.

The Committee to award premiums for extended reports, would respectfully submit the following awards:

1st prem. to Eph'm Graham, Lunenb'g, for report on Grain, $10 00
2d " L. B. Caswell, Fitchb'g, report on Thoroughbreds, 6 00
3d " A. B. Davis, Clinton, report on Working Oxen, 4 00

The Committee are gratified to find that a much larger number of full reports than usual were presented this year and regret that they have not money to award to several others, almost, if not quite, as deserving as those for which the premiums were given.

GEO. S. HOUGHTON, *for the Committee.*

ANALYSIS OF PREMIUMS AND GRATUITIES AWARDED.

Amount awarded for Town Teams,	$35 00
" " " Neat Stock,	372 00
" " " Horses,	620 00
" " " Swine,	47 00
" " " Sheep,	12 00
" " " Poultry,	19 00
" " " Fruits,	63 75
" " " Flowers,	22 00
" " " Vegetables,	91 25
" " " Bread,	7 00
" " " Butter,	17 00
" " " Agricultural Implements,	41 00
" " " Manufactures,	112 75
" " " Other Objects,	300 00
	$1759 75

The Premiums and Gratuities paid to one hundred and forty-two persons, were distributed as follows:

Fitchburg,	$967 10	Ashby,	$7 50
Lunenburg,	141 00	Wilton, N. H.,	10 00
South Royalston,	10 00	Ashburnham,	1 87
Leominster,	134 23	Templeton,	20 00
Princeton,	65 50	Barre,	7 00
Winchendon,	30 00	Westminster,	7 00
Sterling,	20 00		
Harvard,	3 50		$1424 70

Amount of Premiums offered,	$2,226 75
Amount of Premiums and Gratuities awarded,	1,759 75
Amount of Premiums and Gratuities paid,	1,424 70
Value of Real Estate,	$16,000 00

HENRY ALLISON, Treasurer,

In account with Worcester North Agricultural Society.

1871.		*Dr.*
Dec. 10,	To cash of B. W. Eddy, shingles sold,	$ 2 25
12,	Day & Burt, use of tables,	5 00
24,	Fitch. Lit. Club, do.	85
1871, Sept. 26,	cash, admission to grounds,	676 00
"	" 72 dinner tickets,	72 00
"	" 78 seats, "	7 80
27,	admission to grounds,	1126 00
"	" 68 dinner tickets,	68 00
"	" 432 seats, "	43 20
Oct 9,	cash of State Treasurer,	600 00
"	L. Downe, rent of grounds,	73 50
"	J. H. Lockey, advertising,	6 00
11	B., C. & F. R. R., tickets sold,	32 90
13	Vt. & Mass. R. R. Co., do.,	121 45
19	Cheshire R. R. Co., do	23 10
	entrance fees,	171 00
	12 memberships,	60 00
		$3089 05
Cash on hand,		985 43
Deficiency, about		2844 57
		$3830 00

The following named gentlemen have shown their interest in the welfare and prosperity of the Society by donating the premiums awarded to them at the last Fair :

Capt. E. T. Miles,	$68 75
Augustus Whitman,	75 00
Lyman Nichols,	31 25
John Brooks,	31 00

There were quite a number of smaller amounts not called for, by different members of the Society.

1871.		*Cr.*
Jan'y 9,	By cash paid G. S. Houghton, (postage)	$ 7 25
Sept. 25,	Prof. S. A. King, (balloon)	300 00
Oct. 3,	J. L. & H. F. Piper, (printing, 1870)	279 00
4,	W. A. Carleton, (selling tickets)	6 00
5,	Horace Wood, (weigher)	3 00
7,	H. C. Hitchcock, (labor)	6 50
14,	D. North, (hay drawn, 1870)	81 17
Nov, 29,	Premiums,	1414 70
"	mileage on swine,	6 00
Dec. 6,	cash on hand,	985 43
		$3089 05

Bills due, about	$2,389 00
Interest, "	1,530 00
	$3830 00

PRESIDENTS, ORATORS & SECRETARIES

OF THE

Worcester North Agricultural Society.

PRESIDENTS.

1850–1.—ABEL F. ADAMS, Esq., of Fitchburg.
1852–3.—Hon. IVERS PHILLIPS of Fitchburg.
1854–5.—Hon. MOSES WOOD of Fitchburg.
1856–7.—THOMAS R. BOUTELLE, M. D., of Fitchburg.
1858–9.—Hon. JABEZ FISHER of Fitchburg.
1860–1.—THOMAS BILLINGS, Esq., of Lunenburg.
1862–3.—LEWIS H. BRADFORD, Esq., of Fitchburg.
1864–5.—Hon. OHIO WHITNEY, Jr., of Ashburnham.
1866. —JOSEPH UPTON, Esq., of Fitchburg.
1867. —JOSHUA T. EVERETT, Esq., of Princeton.
1868. —EUGENE T MILES, Esq., of Fitchburg.
1869. —SAMUEL OSGOOD, Esq., of Sterling.
1870. —WILLIAM WOODBURY of Fitchburg.
1871–2.—Hon. JOHN H. LOCKEY of Leominster.

ORATORS.

1850.—Hon. CHARLES HUDSON of Lexington.
1852.—THOMAS E. PAYSON, Esq., of Rowley.
1853.—Rev. HORATIO STEBBINS of Fitchburg.
1854.—Gov. EMORY WASHBURN of Worcester.
1855.—Hon. NATHANIEL P. BANKS of Waltham.
1856.—CHARLES L. FLINT, Esq., of Boston.
1857.—JUSTUS TOWFR, Esq., of Lanesborough.
1859.—Hon. GEORGE S. BOUTWELL of Groton.
1860.—Hon. GEORGE B. LORING of Salem.
1861.—Hon. A. H. BULLOCK of Worcester.
1862.—Rev. A. N. ARNOLD, D. D., of Westboro'.
1863.—LUTHER H. TUCKER, Esq., of Albany, N. Y.
1867.—GEORGE E. TOWNE, Esq., of Fitchburg.
1868.—Hon. DANIEL NEEDHAM of Groton.
1869.—Hon. WILLIAM SPRAGUE of Rhode Island.
1870.—Hon. ALVAH CROCKER of Fitchburg.
1871—DR. JAS. R. NICHOLS of Boston.

SECRETARIES.

1850-1.—NATHAN UPHAM of Fitchburg.
1852. —JOSEPH PIERCE of Fitchburg.
1853. —CHARLES W. WILDER of Fitchburg.
1854-5—THOMAS R. BOUTELLE of Fitchburg.
1856-7—JABEZ FISHER of Fitchburg.
1858-63—WILLIAM G. WYMAN of Fitchburg.
1864 —LEWIS H. BRADFORD of Fitchburg.
1865-6—ALVIN M. SAWYER of Fitchburg.
1867-9—LEWIS H. BRADFORD of Fitchburg.
1870. —WALTER A. EAMES of Fitchburg.
1871-2.—GEO. S. HOUGHTON of Fitchburg.

COMMITTEES AND PREMIUMS

FOR THE

TWENTIETH ANNUAL EXHIBITION,

TO BE HELD AT FITCHBURG,

Tuesday and Wednesday, September 24th and 25th, 1872.

No person will be allowed to become a competitor for any of the Premiums herein offered, unless he shall have made an entry for the same, with the Secretary, within the time prescribed for each class, nor unless he shall have furnished all required statements relating thereto, within the specified time.

For the convenience of those who live at a distance, entries may be made by Mail; and all entries so made must be delivered at some post-office one day previous to the expiration of the time specified, and must bear proof of having been so delivered, either by postmark, or a certificate of registry from the Postmaster.

☞Communications for the Secretary should be sent to Fitchburg.

STOCK.

All entries for premiums under this head must be made on or before the Friday previous to the Show, except Horses and Poultry, which may be as late as the Monday previous, and all stock must be owned by the person who enters it.

All persons who are required to furnish a statement, must do so to the Secretary at the time of making the entry, and he shall post copies on the days of exhibition.

All live stock must have been raised by the person entering the same, or owned by him at least three months next previously, except in the case of mis-mating oxen and horses, rendered necessary by injury or disease.

Each entry of stock for the pens must specify the breed of the animal, if known, and the age.

Fat cattle, working cattle, and draught horses must be weighed on the scales on the grounds of the Society, and a certificate furnished the Secretary.

The weight of all other stock will not be required.

All stock except oxen shown only in Town Teams, taken from the grounds before 3 o'clock P M., on Wednesday without permission of the President, shall forfeit all premiums that may have been awarded to it.

The committees on Neat Stock, Sheep, Swine and Poultry, and on the Trials of Working Oxen, and the Plowing Match, shall make their awards previous to 3 o'clock P. M., on Tuesday. They shall designate the premiums with ribbons or cards, and shall make their reports to the Secretary previous to 12 o'clock M, on Wednesday.

The Society will provide good hay for all Stock entered for premium or exhibition during the time of the Show, and will furnish grain at cost, to all who may require it.

Hereafter, the best animals exhibited shall be entitled to the premiums, without regard to former awards.

Committee in charge of Grounds.—Hon. J. H. Lockey, Leonard Downe.

Committee on Pedigrees.—John Brooks, Princeton; Augustus Whitman, Leominster; Joel Page, Fitchburg.

Committee on Animals for Exhibition.—Ephraim Graham of Lunenburg.

Committee on Forage.—A. P. Goodrich, Fitchburg

Committee on Finance.—Jabez Fisher, Joseph Cushing, E T. Miles, Fitchburg.

THOROUGH BRED STOCK.

Committee.—Elwin D. Works, Fitchburg; Josiah Page, Westminster; Merrick Wallace, Ashburnham; John Hayward, Ashby; Joseph Whitney, Sterling.

SHORT HORNS, AYRSHIRES, JERSEYS, DEVONS, OR OTHER THOROUGH BRED STOCK.

Herds consisting of One Bull and not less than Four Females, all one year old and upwards, and owned by the competitor for four months preceding the show. Two premiums—$12, 8.

BULLS.

Two years old and upwards. Two premiums—$8, 5.
One year old and under two. Two premiums—$6, 4.
Calves (under one year). Two premiums—$5, 3.

COWS.

Four years old and upwards. Two premiums—$6, 4.
Three years old and under four. Two premiums—$5, 3.
Two years old and under three. Two premiums—$4, 2.
One year old and under two. Two premiums—$3, 2.
Calves (under one year). Two premiums—$3, 2.

Competitors for premiums on milch cows, whether for herds or single animals, and milk heifers, will be required to certify in writing, at the time of entry, to the weight of the milk, or to the weight of butter, as the case may be, during each of the six days commencing with the first Monday in June, and the corresponding six days in September; and to the manner of keeping and general management. Cows that calve near or after the first Monday in June, may be tried at another time.

Competitors will be required to state the time of last calving of their cows.

MILCH KINE.

Committee.—Samuel Osgood, Sterling; Edmund Houghton, Lunenburg; John Cutter, Winchendon; Chas. K. Sawyer, Fitchburg; Timothy Lincoln, Leominster.

Herds of four cows or heifers, each. Two premiums—$10, 7.

The committee will regard age, expense of keeping, &c.

Cows for butter. Two premiums—$5, 4.
Heifers, three years old, for butter. Two premiums—$5, 4.
Heifers, two years old, for butter. Two premiums—$4, 3.
Cows, for milk. Two premiums—$5, 4.
Heifers, three years old, for milk. Two premiums—$5, 4.
Heifers, two years old, for milk. Two premiums—$4, 3.

Competitors for premiums on milch cows, whether for herds or single animals, and milch heifers, will be required to certify in writing, at the time of entry, to the weight of the milk, or to the weight of butter, as the case may be, during each of the six days commencing with the first Monday in June, and the corresponding six days in September; and to the manner of keeping and general management. Cows that calve near or after the first Monday in June, may be tried at another time.

Competitors will be required to state the time of last calving of their cows.

HEIFERS.

Committee.—N. B. Reed, Princeton; Geo. L. Rice, Leominster; Henry C. Hill, Gardner; Alfred R. Willard, Harvard; Edwin S. Burnap, Fitchburg.

Intended to be kept for the Dairy.

Two years old. Two premiums—$4, 3.
Yearlings Two premiums—$3, 2.

HEIFER CALVES.

Committee.—Thomas Sheldon, Fitchburg; Geo. G. Sampson, Ashburnham; John M. Stevenson, Sterling; Emroy Farmer, Harvard; Winslow E. Beaman, Princeton.

Calves more than four months old. Two premiums—$4, 3.
Calves more than four months old, raised by hand. Two premiums—$4, 3.

Persons exhibiting calves raised by hand, shall furnish statements to the Secretary, of the manner of raising.

YEARLING STEERS AND STEER CALVES.

Committee.—S. G. Mirick, Princeton; Jesse Foster, Ashby; Luther Page, Lunenburg; Stephen Ward, Ashburnham; Luke Divol, Westminster.

Yearlings. Two premiums—$3, 2
Trained Yearlings. Two premiums—$3, 2.
Calves. Two premiums.—$6, 4.
Calves raised by hand. Two premiums—6, 4.
Trained Calves. Two premiums—$4, 3.
Best Minor Trainers. Two premiums—$3, 2.

Persons exhibiting calves raised by hand, shall furnish a statement to the Secretary of the manner of raising.

PENS OF CALVES.

Committee.—E F. Bailey, Joel Page, Fitchburg; Elbridge Johnson, Leominster; Augustus Hubbard, Ashby; Geo. Billings, Lunenburg.

Best pen of Calves, not less than four. Two premiums—$10, 5.

Calves entered in Pens of Calves cannot compete for premiums as single animals.

WORKING OXEN—SINGLE TEAMS.

Committee.—Franklin Nourse, Sterling; Geo. Howard, Ashburnham; John M. Forristal, Winchendon; Joseph Cozzens, Leominster; E. A. Goodrich, Fitchburg.

Working Oxen. Five premiums—$7, 6, 5, 4, 3.
Best Minor Teamsters. Two premiums—$5, 3.

The Working Oxen will be tried attached to loads weighing including the cart, one-third more than themselves.

WORKING OXEN AND HORSE.

Committee.—D. C. Miles, Westminster; Herbert D. Goodrich, Silas Pratt, Fitchburg; W. W. Benson, Princeton; Geo. H. Grout, Leominster.

Working Oxen and Horse. Two premiums—$7, 5.
Best Minor Teamster. Two premiums—$5, 3.

The working oxen and horse teams will be tried attached to a stone boat loaded to equal, including the stone boat, the weight of the team.

STEERS MORE THAN TWO YEARS OLD.

Committee.—Josiah Puffer, Harvard; Geo Woods, Leominster; Hosea M. Caswell, Fitchburg; Geo. Kendall, Sterling; E. W. Gill, Princeton.

Three years old. Two premiums—$5, 4.
Best Minor Teamster. Two premiums—$4, 2.

The three years old steers will be attached to carts and tried like the oxen on the same ground; the cart and load to equal the steers in weight.

Two years old. Two premiums—$4, 3.
Trained two years old. Two premiums—$4, 2.
Best Minor Trainers. Two premiums—$3, 2.

FAT CATTLE.

Committee.—Samuel F. Whitney, Harvard; Abel Derby, Fitchburg; Cephas Derby, Leominster; Chas. Flagg Sterling; Benj. Wyman, Westminster.

Best fat Ox. Two premiums—$8, 5.
Best fat Cow. Two premiums—$6, 3.
Best fat Steer or Heifer. Two premiums—$6, 4.

All competitors with fat cattle must furnish a statement to the Secretary, of the mode and expense of feeding.

SWINE.

Committee.—Daniel Putnam, Levi White, Lunenburg; W. C. Upton, Fitchburg; Ephraim Johnson, Leominster; A. W. Benjamin, Westminster.

Mu-t be entered like other stock.

Boars more than one year old. Two premiums—$4, 3.
Less than one year old. Two premiums—$3, 2.
Best Fat Hogs, having regard to age. Two premiums—$8, 4.
Fat Pigs less than eight months old. Two premiums—$4, 2.
Breeding Sows. Two premiums—$8, 4.
Weaned Pigs, not less than four. Two premiums—$4, 2.

All Swine, and each litter of Pigs, will be allowed fifteen cents mileage for each mile more than two, that they are brought.

SHEEP.

Committee —Nathan Caswell, Fitchburg; John G. Woodward, Ashburnham; F. B. Harrington, Leominster; John Fairbanks, Lunenburg; Joseph Whitcomb, Princeton.

Flocks. Two premiums—$10, 5.
Bucks. Two premiums—$5, 3.
Cossets. Two premiums—$2, 1.
Flocks of Lambs. Two premiums—$4, 2.

Flocks of sheep must contain at least six, owned by one person. Lambs less than six months old cannot compete as sheep.

POULTRY.

Committee.—Stillman Haynes, Fitchburg; S. A. Tisdale, Leominster; H. Marcellus Heywood, Sterling; W. A. Carleton, Fitchburg; Aaron P. Whitney, Lunenburg.

Must be entered like other stock.

Barnyard fowls, not less than three.

Brahmas. Two premiums—$2, 1.
Black Spanish. Two premiums—$2, 1.
White Leghorns. Two premiums—$2, 1.
Any other breed. Two premiums—$2 1.
Turkeys, not less than three. Two premiums—$3 2.
Geese, not less than three. Two premiums—$3, 2.
Ducks, not less than three. Two premiums—$3, 2.

TOWN TEAMS

Committee.—Cyrus Kilburn, Lunenburg; Antipas Maynard, Ashburnham; Moses B. Heywood, Sterling; Edwin Gates, Leominster; Reuben Vose Jr., Winchendon.

Best Town Teams, not less than fifteen yoke from any one town. Two premiums—$30, 20.

These teams may consist of either oxen or steers, or both.

FOOT RACE.

Committee.—C. H. B. Snow, Geo. B. Proctor, Thomas Upton, Warren B. Page, Fitchburg ; C. W. Carter, Leominster.

One race each day. 10 per cent. entrance fee.

Half mile heats. Two premiums—$10, 6.

Three entries to be made.

A person having received one premium, can only compete for a higher.

HORSES.

Entries for all horses where entrance fee is required to be paid, must be made before 9 o'clock A. M , of the day on which they are exhibited.

GENTLEMEN'S DRIVING HORSES—SINGLE.

Committee —Rodney Wallace, Fitchburg ; A. L Burditt, Leominster ; Daniel Putnam, Wm. L. Brown, Lunenburg ; Liberty Wellington, Ashby.

Gentlemen's Driving Horses. Two premiums—$10, 5.

Speed considered, but not to govern

In the trial of horses in this class, they shall make a standing start from the Judges' stand.

Walking Horses. Two premiums—$10, 5.

Horses entered in this class will be required to walk one mile, carrying a load to equal their own weight including the carriage.

MATCHED DRIVING HORSES.

Committee.—Ohio Whitney, Ashburnham ; Porter Piper, Leominster ; L. P. Comee, Fitchburg ; Chas. H. Loring, Sterling ; M T. Gardner, Shirley.

Matched Driving Horses. Two premiums—$10, 5.

FAMILY HORSES—SINGLE.

Committee.—Francis W. Wright, Ashby ; Wm. Brown, 2d, Winchendon ; Levi N. Smith, Baldwinville ; Emory Tilton, Leominster ; Rufus Hastings, Sterling

Family Horses—Single. Two premiums—$6, 4.

COLTS.

Committee.—J. E. Merriam, Princeton; S. W. A. Stevens, So. Gardner; J. M. Sawtell, Joseph Cushing, Fitchburg; James Putnam, Lunenburg.

Stallions, three years old. Two premiums—$10, 5.
Geldings, three years old. Two premiums—$10, 5.
Fillies, three years old. Two premiums—$10, 5.
Stallions or Geldings, two years old. Two premiums—$6, 3.
Fillies, two years old. Two premiums—$6, 3.
Yearling Colts. Two premiums—$5, 3.

STALLIONS.

Committee—Geo. Jewett, Fitchburg; W. W. Comee, Boston; D. W. Salisbury, Leominster; Hiram Whitney, Harvard; Anan Stockwell, So. Royalston.

Best Stallions for general use, four years old and upwards. Two premiums—$10, 5.

Stallions entered in this class will be required to exhibit specimens of their stock.

MARES AND SUCKING COLTS.

Committee.—Warren Simonds, Templeton; Joel Hayward, Ashby; Wm. B. Richardson, Sterling; Ivers Adams, Ashburnham; W. W. Shattuck, Fitchburg.

Breeding Mares. Two premiums—$8, 5.
Colts, less than one year old. Two premiums—$4, 3.

The mares must be four years old and upwards, and accompanied by their colts.

No premium shall be awarded to a mare known to be unsound.

DRAUGHT HORSES.

Committee.—Solon Carter, Leominster; Silas Pratt, Willard H. Lowe, Fitchburg; Wm. H. Brown, East Princeton; Homer J. Hayward, Ashby.

Draught Horses—Pairs. Two premiums—$6, 4.
Draught Horses. Two premiums—$5, 3.

Draught Horses will be tried attached to a stone boat loaded to weigh, including the stone boat, one-fourth more than the horses.

The same draught horse cannot receive a premium as a single horse and also one of a pair, but a draught horse may compete as a family horse.

These must be four years old and upwards.

PLOWING MATCH.

All entries for plowing must be made on or before the Thursday previous to the exhibition, and one dollar must be deposited with each entry, to be returned to the competitor if he plows, otherwise forfeited to the Society.

No teams, or parts of teams, will be allowed to compete for more than one premium on plowing.

DOUBLE TEAMS.

Committee.—Wm. Woodbury, Fitchburg; Leonard Barrage, Whiting Gates, Leominster; Wm. Baker, Lunenburg; Stephen Ward, Ashburnham.

Double Teams. Three premiums—$10, 7, 5
Minors, with Steers. Three premiums—$6, 4, 2.

SINGLE TEAMS

Committee.—Alden Derby, Jonas W. Gates, Leominster; Wm. H. Sawyer, Sterling; John Davis, Ashby; James H. Laws, Ashburnham.

Single Teams. Three premiums—$10, 7, 5.
Minors, with Steers. Three premiums—$6, 4, 2.

HORSE TEAMS.

Committee.—Stephen Shepley, Levi Kendall, Fitchburg; Franklin L. Haskell, Leominster; Merrick Willard, Ashburnham; E. P. Thompson, N. Leominster.

Horse Teams. Three premiums—$10, 7, 5.

CROPS.

All entries for premiums in this department must be made with the Secretary, on or before June 15th, with the exception of English turnips and cabbages, which must be entered on or before August 15th. Immediately after these dates, the Secretary will transmit to all competitors a copy of the following blank form, adopted by the Trustees, to correspond with the requirements of the Board of Agriculture.

In pursuance of authority delegated to the Board of Agriculture, by chap. 24 of the Acts of 1862, Agricultural Societies receiving the bounty of the State, are required to make use of the following form, and be governed by its conditions, in the mode of ascertaining the amount of crops entered for premium :

Worcester North Agricultural Society.

Statement concerning a crop of , raised by Mr. , in the town of , 1872.

What was the crop of 1868?
What manure was used, and how much?
What was the crop of 1869?
What manure was used, and how much?
What is the nature of the soil?
When, and how many times plowed, and how deep?
What other preparation for the seed?
Cost of plowing and other preparation?
Amount of manure, in loads of thirty bushels, and how applied?
Value of manure upon the ground?
When and how planted, and the amount and kind of seed?
Cost of seed and planting?
How cultivated, and how many times?
Cost of cultivation including weeding and thinning?
Time and manner of harvesting?
Cost of harvesting, including the storing and husking or threshing?
Amount of straw, stover, or other product?

Competitors for premiums are particularly requested to make any statements or suggestions not elicited by the above questions, and which may be valuable as contributions to agricultural information.

REMARKS.

The Committee to whom is entrusted the award of premiums on field crops, may award the premiums according to their judgment; but, for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, and give all possible information thereon, over their signatures, and return the same to the Secretary of the Society, to be published in the annual Transactions.

In ascertaining the amount of crop, any vessel may be used, and the weight of its contents once, multiplied by the number of times it is filled by the crop.

The certificate shall state the weight of all crops only in a merchantable state.

In measuring the land, any competent person may be employed, whether a sworn surveyor or not.

In ascertaining the amount of a hay crop, entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE

Practised and adopted by the State Board of Agriculture.

Wheat, Potatoes, Sugar Beets, Mangel Wurzel, Ruta Bagas, White Beans and Peas,	60 lbs. to the bushel.
Corn, Rye,	56 " " "
Oats,	32 " " "
Barley, Buckwheat,	48 " " "
Cracked Corn, Corn and Rye and other meal, except Oat, and English Turnips,	50 " " "
Parsnips,	45 " " "
Carrots,	55 " " "
Onions,	52 " " "

GRAIN.

Committee.—Ebenezer Bird, Leominster; A. P. Whitney, Lunenburg; Wm. H. Fuller, Leominster; James P. Putnam, John M. Harris, Fitchburg.

For the largest crop of herds-grass seed, not less than three bushels. Two premiums—$5, 3.

Red top, not less than six bushels. Two premiums—$5, 3.

The committee may award gratuities for valuable new varieties of grain.

For the most profitable crops of corn, wheat, rye, barley, and oats, one acre each; of cabbages, beans, and flax, one-eighth acre each; the product of corn to be not less than 4320 lbs. on the cob; that of wheat, rye, barley, and oats, not less than 1 00 lbs. of grain each.

Corn. Two premiums—$10, 8.
Wheat. Two premiums—$10, 8.
Flax. Two premiums—$5, *Grasses and Forage Plants.*
Rye. Two premiums—$4. *Grasses and Forage Plants.*
Barley. Two premiums—$4, *Grasses and Forage Plants.*
Oats. Two premiums—$4, *Grass s and Forage Plants.*
Field Beans. Two premiums—$2, *Grasses and Forage Plants.*

Samples must be exhibited at the Fair.

ROOT CROPS AND CABBAGES.

Committee.—Ephraim Graham, Lunenburg; Hobart Spencer, Ashby; Estabrook Moore, Leominster; Wm. Baker, Lunenburg; Joseph Whitney, Sterling.

For the most profitable crops of potatoes, one-fourth acre each; of carrots, onions, beets, and turnips, one-eighth acre each.

Potatoes, not less than 3000 lbs. Two premiums—$8, 5.
Carrots, not less than 5500 lbs. Two premiums—$4, 3.
Onions, not less than 2000 lbs. Two premiums—*Harris on Ins.*, $2.
Sugar Beets. Two premiums—$2, 1.
Mangel Wurzel. Two premiums—$2, 1.
English Turnips. Two premiums—*Harris on Insects*, $2.
Turnips of any other variety. Two premiums—*Harris on Insects*, $2.
Cabbages. Two premiums—$2, 1.

FARMS.

Committee.—Geo. S. Houghton, Fitchburg; C. C. Boyden, Leominster; Ohio Whitney, Ashburnham.

All entries must be made at least one week before commencing the experiments.

Best managed and cultivated Farm, to be awarded and paid in 1873. Two premiums—$50, 25.

Entries must be made on or before May 1st, 1872.

GARDENS.

Committee.—Jabez Fisher, L. H. Bradford, Fitchburg; Emory Burrage, Leominster.

Kitchen or Mixed Gardens. Two premiums—$12, 8.
Flower Gardens. Two premiums—$4, 2.

No person having received a premium for a farm, kitchen or mixed garden, shall be allowed to compete for another with the same land, within five years, except for a higher one.

Entries must be made on or before June 15th.

EXPERIMENTS.

Committee.—Augustus Whitman, Leominster; Joel Page, Fitchburg; Ezra Kendall, Sterling.

Best Experiment to determine the best and most profitable time and condition in which to cut grass for hay, having regard to the total annual product. Two premiums—$15, 10.

Best Experiment testing the value of corn and cob for fattening purposes, with the cob or otherwise. One premium—$15.

Best Experiment in steaming food for cattle and horses. One premium—$10.

Best Experiment testing the comparative value of drilling wheat or other grain, to broadcast sowing. One premium—$5.

There will be placed at the disposal of the committee, for the best and most reliable agricultural experiments of any kind, made in 1872, the sum of twenty dollars.

EXHIBITION AT THE HALL.

No article intended for the Hall will be entitled to a premium unless it shall have been deposited by ten o'clock A. M., on Tuesday.

All articles should be plainly marked with the name and residence of the exhibitor, except samples of Bread and Butter, which must be designated by numbers. A strict compliance with these regulations will be absolutely necessary to entitle competitors to any premiums that may be awarded to them.

APPLES, PEACHES, PLUMS AND QUINCES

Committee.—D. H. Merriam, Benj. Snow, B. F. Wallis, Fitchburg; Wm. B. Hosmer, Leominster; W. D. Peck, Sterling.

APPLES.

Twelve varieties of five specimens each. Two premiums—*Harris on Insects*, $2.
Six varieties of five specimens each. Two premiums—$2, 1.50.
Three varieties of five specimens each. Two premiums—$1.50, 1.
Best exhibition of twelve specimens of Baldwins. Two premiums—$1, .50.
Hubbardston Nonsuch. Two premiums—$1, .50.
R. I. Greenings. Two premiums—$1, .50.
Roxbury Russets. Two premiums—$1, .50.
Gravensteins. Two premiums—$1, .50.
Palmer Greenings. Two premiums,—$1, .50.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

PEACHES.

Best Collection. One premium—*Harris on Insects.*
Best Dishes or Baskets. Two premiums—$2, 1.

PLUMS.

Best Collection. One premium—$2.
Best Plates. Two premiums—$1, .50.

QUINCES.

Best Dishes or Baskets. Two premiums—$1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

PEARS AND GRAPES.

Committee.—Frank W. Wallace, Ashburnham; Jerome B. Gardner, Shirley; Chas. H. Colburn, Leominster; J. M. Twichell, Benj. Safford, Fitchburg.

PEARS.

Twelve varieties of five specimens each. Two premiums—*Harris on Insects*, $2.
Six varieties of five specimens each. Two premiums—$2, 1.50.
Three varieties of five specimens each. Two premiums—$1.50, 1.
Best exhibition of twelve specimens of Bartlett. Two prems.—$1, .50.
Seckel. Two premiums—$1, .50.
Flemish Beauty. Two premiums—$1, .50.
Duchess. Two premiums—$1, .50.
Louise Bonne de Jersey. Two premiums—$1, .50.
Lawrence. Two premiums—$1, .50.
Beurre d'Anjou. Two premiums—$1, .50.
Sheldon. Two premiums—$1, .50.

GRAPES.

Best displays of varieties of Native Grapes. Two premiums—$5, 3.
Best six clusters Israella. Two premiums—$1, .50.
Best six clusters Concord. Two premiums—$1, .50.
Best six clusters Delaware. Two premiums—$1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

ASSORTED FRUITS AND FLOWERS.

Committee.—J. C. Allen, Leominster; Mrs C. A. Mason, Mrs. Louisa A. Woodbury, Mrs. John Upton, Miss Hattie E. Miles, Fitchburg.

ASSORTED FRUITS.

Best Dishes or Baskets. Two premiums—$2, 1.

PLANTS IN POTS.

Best displays of named Plants in Pots. Two premiums—$2, 1.
Best three named Plants in Pots. Two premiums—$2, 1.

CUT FLOWERS.

Best display of Cut Flowers. Two premiums—$2, 1.
Best five named Asters. Two premiums—$2, 1.
Best five named Dahlias. Two premiums—$2, 1.
Best five named Verbenas. Two premiums—$2, 1.
Best pair of Parlor Bouquets. Two premiums—$2, 1.
Best pair of Hand Bouquets. Two premiums—$2, 1.

The same plants in pots cannot compete for both the best display and the best three; nor can the same Asters, Dahlias, or Verbenas, compete for the best display and the best five.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to receive more than one copy of *Harris on Insects;* if more than one is awarded, cash will be paid instead, at the rate of three dollars per copy; and if any to whom a copy is awarded, already has one, he may receive the copy awarded, or the cash, as above, at his option.

VEGETABLES.

Committee.—C. L. Joslin, Leominster; Ephraim Whitman, James H. Marshall, No. Leominster; Joseph Foster, Ashby; John Prichard, Fitchburg.

Best collections Kitchen Vegetables. Two premiums—$7, $5.
Best collections Garden Seeds. Two premiums—$5, 3.
Collections of Potatoes. Two premiums—$2, 1.
Marrow Squashes. Two premiums—$1, .50.
Hubbard Squashes. Two premiums—$1, .50.
Crookneck Squashes. Two premiums—$1, .50.
Pumpkins. Two premiums—$.75, .50.
Cabbages. Two premiums—$.75, .50.
Cauliflowers. Two premiums—$.75, .50.
Celery. Two premiums—$.75, .50.
Onions. Two premiums—$.75, .50.
Turnip Beets. Two premiums—$.75, .50.
English Turnips. Two premiums—$.50, .25.
Tomatoes. Two premiums—$50, .25.
Field Beans. Two premiums—$.50, .25.
Lima Beans. Two premiums—$ 50, .25.
Seed Corn, in traces. Two premiums—$1, .75.

The committee will regard perfection of growth and quality, and not size.

In addition to the above, there will be allowed for gratuities, ten dollars.

Of squashes, pumpkins, cabbages, and celery, there should be six specimens in each lot; of cauliflowers, three; of onions, beets, turnips and tomatoes, one peck in each lot; of field beans, one-half peck; and of Lima beans, two quarts.

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES AND JELLIES.

Committee.—A. Norcross, Mrs. L. H. Bradford, Mrs. E. Torrey, Mrs. Mary A. Downe, Fitchburg; Mrs J. H. Lockey, Leominster.

Bread made by unmarried ladies.

White Bread. Three premiums—$2, 1, .50.
Unbolted Wheat Bread. Three premiums—$2, 1, .50.
Bolted Rye Bread. Three premiums—$2, 1, .50.
Rye and Indian Bread. Three premiums—$2, 1, .50.

All bread offered for premiums must have been baked on the Monday preceding the exhibition.

BUTTER AND CHEESE.

Lump Butter, not less than 12 lbs. Two premiums—$4, 3.
June Tub Butter, not less than 25 lbs. Two premiums—$3, 2.
Sept. " " " Two premiums—$3, 2.
Cheese, not less than 50 lbs. Two premiums—$2, 1.50.

PICKLES AND HONEY.

Pickles. Three premiums—$.75, .50 25.
Virgin Honey in the comb. Three premiums—$2, 1, .50.

In addition to the above, there will be allowed for gratuities, ten dollars.

Competitors will be required to furnish, to the Secretary, a detailed statement in writing, of the process of manufacturing butter, cheese, and pickles; and no others shall be considered.

MECHANICS AND MANUFACTURES.

Committee.—E. P. Monroe, Chas. Fessenden, John F. Haskins, S. W. Putnam, E. M. Dickinson, Fitchburg.

Specimens exhibited must be manufactured by the competitor.

For the best *specimens* of mechanic and manufactured articles, exclusive of ladies' home manufacture, there will be placed at the disposal of the committee, the sum of two hundred dollars.

For the best *exhibition* of manufactured articles, there will be placed at the disposal of the committee the sum of fifty dollars.

AGRICULTURAL IMPLEMENTS.

Committee.—John Brooks, Princeton; M. D. Hawes, Leominster; Augustus Gates, John Burr, Ashby; Joel Page, Fitchburg.

Best Farm Wagon, for one or two horses. One premium—$10.
Best Ox Cart. One premium—$5.
Best Team Harness. One premium—$5.
Best Hay or Straw Cutter. One premium—$3.
Best Ox Yoke complete. One premium—$3.
Best Set Horse Shoes. One premium—$2.

In addition to the above, there will be allowed for gratuities, fifty dollars.

FINE ARTS.

Committee.—Jacob Haskell, Mrs. J. B. Lane, Mrs. L. B. Fisher, Mrs. M. M. Shepley, Miss Jennie T. Farwell, Miss Lizzie H. Haskell, Fitchburg.

Best collection by a Photographic Artist. Two premiums—$4, 2.
Oil Paintings. Two premiums—$4, 2.
Best Crayon Drawings. Two premiums—$3, 2.
Pencil Drawings. Two premiums—$2, 1.
Best specimen of Penmanship by a non-professional. One premium—$1.

In addition there will be placed at the disposal of the committee, for gratuities, the sum of twenty dollars.

Specimens exhibited must be actually executed by the competitor.

FANCY ARTICLES.

Committee.—Rev. F. Magwire, Mrs. E. T. Miles, Mrs. Lorenzo Barker, Mrs. T. Palmer, Mrs. J. F. Stiles.

For the best specimens of Ladies' Useful and Fancy Articles of their own manufacture, including specimens of nice mending and darning, there will be placed at the disposal of the committee, the sum of thirty dollars.

ESSAYS.

Committee.—Stephen Shepley, Charles Mason, Fitchburg; C. H. Merriam, Leominster.

Best Essays on some practical subject connected with agriculture, deemed worthy of publication in the Society's "Transactions." Two premiums—$25, 15.

All persons competing for these premiums must file their Essays with the Secretary on or before the 1st of September. Each Essay is to be marked with a motto or design, and accompanied with a sealed envelope bearing a corresponding motto or design, and containing the name of the author.

The envelopes of the successful competitors will be opened on the day of the Exhibition, immediately upon the announcement of the awards.

COMMITTEES' REPORTS.

Committee.—The President, Vice Presidents and Secretary.

For the purpose of inducing the chairmen of the several committees to take upon themselves more labor and care in elaborating their reports, the following premiums will be paid :—$10, 6, 4.

Detailed reports in connection with awards, (except on Grain and Root Crops,) must be delivered to the Secretary on or before Nov. 1st.

PROSPECTIVE—EXPERIMENTS.

Committee.—Jabez Fisher, Joel Page, Fitchburg; Cyrus Kilburn, Lunenburg.

For the best experiment going to show the economy of growing grass constantly through a period of six years, on one acre or more of land, as compared with a rotation in which grass shall be grown three or four years only, the remainder being grain or hoed crops, of which one, at least, shall be Indian corn. The total amount and kind of manure in each case must be the same per acre, but the time and mode of application may be different. Three premiums—$50, 25, 15.

Entries must be made on or before July 1st, 1872.

APPLE, PEAR, AND PEACH ORCHARDS.

Committee.—Geo. S. Houghton, Thomas Palmer, Fitchburg; Ephraim Graham, Lunenburg.

APPLE ORCHARDS.

For the best Orchards of not less than fifty trees, all having been set after January 1st, 1871, to be awarded in 1875. Two premiums—$25, 10.

PEAR ORCHARDS.

For the best Orchards of not less than fifty trees, all having been set after January 1st, 1872, to be awarded in 1876. Two premiums—$25, 10.

PEACH ORCHARDS.

For the best Orchards of not less than thirty trees, set after April 1st, 1871, to be awarded and paid in 1874. Two premiums—$12, 8.

One orchard was entered for this premium, in 1871, by Lawrin Pratt of Fitchburg.

POTATOES.

Committee.—Ephraim Graham, Cyrus Kilburn, Lunenburg; Benjamin Safford, Fitchburg.

For the best Seedling Potatoes, to be tested for not less than three successive years. One premium—$25.

FOREST TREES.

Committee.—W. B. Hosmer, George Merriam, Leominster; J. P. Putnam, Fitchburg.

For the best plantation of any kind of Forest Trees, suitable for fuel or timber, raised from the seed, not less than five hundred in number, which shall be in the most flourishing condition in the fall of 1876. Three premiums—$25, 15, 10.

Entries must be made on or before the 1st day of June.

ICE HOUSES.

Committee.—William Woodbury, Abel Marshall, Fitchburg; Lyman N. Fairbanks, Westboro'.

For the best constructed Ice House for family purposes, to be tested at least twelve months. One premium—$5.

TROUT.

Committee.—Jabez Fisher, L. H. Bradford, Fitchburg; M. T. Gardner, Shirley.

For the most successful experiments in the artificial propagation of trout, entries to be made on or before June 1st, 1872; premiums to be awarded in 1874. Two premiums—$25, 10.

For best trout not less than six in number, raised artificially, exhibited at the Fair in 1872. Two premiums—$5, 3.

COMMITTEE OF ARRANGEMENTS.

Hon. JOHN H. LOCKEY, Leominster.
LEONARD DOWNE, Fitchburg.
JOSEPH COZZENS, Leominster.
GEORGE S. HOUGHTON, Fitchburg,

RULES.

All teams entered for draught must have been owned by the person entering the same, for at least three months next previous.

Any person competing for a premium, who shall serve on the committee having charge of the department in which he competes, shall retire from the committee while his own competition is in question.

The several committees will not consider themselves bound by the terms of the above offers, to award a premium for anything which they shall deem inferior.

Any person to whom a premium shall have been awarded, in consequence of any deception or misrepresentation used by him, shall not only forfeit such premium, but afterward be incapable of competing for the Society's premiums.

All persons, not members of the Society, to whom may be awarded a premium, or premiums, amounting to five dollars or upward, shall receive a certificate of membership for five dollars, and the balance in cash. If the amount shall be less than five dollars, a deduction of fifty per cent. will be made, unless the individual chooses to make the amount up to that sum, and receive a certificate of membership.

All premiums not demanded on or before November 30th, will revert to the Society.

OFFICERS OF THE SOCIETY FOR 1872.

Elected at the Annual Meeting, December 6, 1871.

Hon. J. H. LOCKEY of Leominster, *President.*
LEONARD DOWNE of Fitchburg, } *Vice Presidents.*
JOSEPH COZZENS of Leominster, }
GEORGE S. HOUGHTON of Fitchburg, *Sec'y and Treasurer.*

TRUSTEES.

O. Whitney, Ashburnham.
Joel Hayward, Ashby.
F. W. Wright, "
Dennis Fay "
S. W. A. Stevens, Gardner.
Josiah Puffer, Harvard.
S. F. Whitney, "
Hiram Whitney, "
Augustus Whitman, Leominster.
W. B. Hosmer, "
C. C. Boyden, "
Porter Piper, "
Solon Carter, "
A. L. Burditt, "
Daniel Putnam, Lunenburg.
Cyrus Kilburn, "
William Baker, "
Eph'm Graham, "
J. T. Everett, Princeton.
J. E. Merriam, "
N. B. Reed, "
John Brooks, "
A. Stockwell, Royalston.
J. O. Parker, Shirley.
M. T. Gardner, "
George Davis, "
Charles Flagg, Sterling.
F. Nourse, "
M. B. Heywood, "
J. M. Sawyer, "
W. Simonds, Templeton.
Levi N. Smith, Templeton,
D. C. Miles, Westminster.
John Minot, "
Benj. Wyman, "
Edward Bacon, "
Reuben Vose, Winchendon.
L. H. Bradford, Fitchburg.
Geo. E. Towne, "
S. J. M. Weston, "
Joseph Cushing, "
Geo. F. Fay, "
Jabez Fisher, "
Abel Marshall, "
Joel Page, "
J. M. Sawtell, "
E. D. Works, "
Lyman Patch, "
A. M. Sawyer, "
E. T. Miles, "
Wm. Woodbury, "
Walter A. Eames, "
Geo. Jewett, "
J. W. Kimball, "
S. W. Putnam, "
S. C. Wright, "
James Goodrich, "
John F. Haskins, "
E. P. Monroe, "
E. M. Dickinson, "
Chas. Fessenden, "
S. H. Howe, Bolton.
A. Whiting, Oakdale.

E. T. MILES of Fitchburg, elected *Member of the State Board of Agriculture*, Dec. 6, 1871, for three years.

TRANSACTIONS

OF THE

WORCESTER NORTH

AGRICULTURAL SOCIETY,

FOR 1872,

TOGETHER WITH A LIST OF THE

COMMITTEES AND PREMIUMS FOR 1873.

FITCHBURG:
SENTINEL OFFICE POWER PRESS PRINT.
1872.

ADDRESS

BY REV. C. W. EMERSON.

If I should tell you what I know about farming, it would not be much. I can better tell you what I know about farmers.

Therefore I have selected as the subject of my address, The Relation of Agriculture to Manhood. Whatever is second in life, manhood is first. And I believe there is no other pursuit so well calculated to develop true manhood as that of agriculture. From agriculture has come almost everything that tends to the development of our civilization. Perhaps I could dwell upon no theme that would be more interesting than that of tracing the origin, and the subsequent development of the arts and sciences from the necessities of agriculture. I think it would be shown that nearly all the arts and sciences had their rise in the needs growing out of agriculture.

Egypt is acknowledged to be the mother of science and art. Why can the principal arts and sciences be traced to Egypt? Because ancient Egypt was exclusively agricultural. Early history will bear us out in the supposition that Ham and some of his descendants emigrated to Egypt and settled on the banks of the Nile, and colonized the whole of lower Egypt. The soil was very fertile, but there was difficulty in securing a crop on account of the inundations of the Nile. For a long time they found themselves unable to determine at precisely what time the inundation, which lasted between two and three months, would commence. At last, however, they descovered one of the most brilliant, though not the largest, of all the stars of Heaven, just close to the horizon, where it shone a few moments before the rising of the sun. This star always made its appearance just before the inundation of the Nile commenced.

This star seemed to the ancients like a faithful watch dog, warning them of approaching danger, therefore they called it the Dog Star. And from this the Egyptians developed, as far as it extended, a perfect system of Astronomy.

Prof. O. M. Mitchell stated in a lecture, a few years since, that he had met, not long before, in the city of St. Louis, a man of great scientific attainments, who, for forty years, had been engaged in Egypt in deciphering the hieroglyphics of the ancients. This gentleman stated to him that he had lately unravelled the inscriptions on the coffin of a mummy, now in the London Museum. The Zodiac, with the exact position of the planets, was delineated on this coffiin, and the date to which they pointed was the Autumnal equinox in the year 1722, B. C., or nearly 3600 years ago.

Prof. Mitchell employed his assistants to ascertain the exact positions of the heavenly bodies belonging to our system on the equinox

of that year and sent him a correct diagram of them, without having communicated his object for so doing. In compliance with this, the calculations were made, and to his astonishment, on comparing the result with the statments of his scientific friend, already referred to, it was found on the 7th of Oct. 1722, B. C., the moon and planets had occupied the exact points in the heavens marked upon the coffin in the London Museum.

The Egyptians dated their year from the rising of the Dog-star, which they represented by the picture of a door-keeper with his key—the one who opened one year, and closed another. Sometimes they gave the picture two heads—the one old, representing the expiring year, and the other young, to denote the new year. Thus were introduced the arts of painting and sculpture. Now we have already shown that the science of astronomy, and the arts just mentioned, grew out of demands created by the pursuit of agriculture. Because the farmer in Egypt needed to know the exact courses of the heavenly bodies, men were set apart and supported at public expense to study astronomy and keep people informed of their movements. At the same point commenced the office of the priest; for those thus set apart were ultimately looked upon as the priests of the power of Heaven.

But I shall not dwell upon the ancient bearings of this subject, but come down to its relations with our modern life, and its vital every day interests. I shall in this address, not attempt to show the relations of agriculture to the arts and sciences which promote civilization, so much as to show the effect of the pursuit of agriculture upon mankind.

There are many elements which go to make up mankind; some of which I shall point out, and endeavor to show how the pursuit of agriculture affects them. First, health:

Health lies at the foundation of every other good. All great efforts of the mind, all productions of genius, have their root in healthy blood and abundant vitality. Morality and virtue might almost be said to be exponents of health. Old Dr. Johnson said, "A man is a rascal as soon as he is sick." Ralph Waldo Emerson says, "If Eric is in robust health, and has slept well, and is at the top of his condition and thirty years old, at his departure from Greenland he will steer west and his ships will reach New Foundland. But take out Eric, and put in a stronger and bolder man,—Biorn or Thorfin,—and the ships will with just as much ease, sail six hundred, one thousand, fifteen hundred miles further, and reach Labrador and New England. There is no chance in results. With adults as with children, one class enter cordially into the game and whirl with the whirling world; the others have cold hands and remain bystanders; or are only dragged in by the humor and vivacity of those who can carry a dead weight." A good maxim would be, Sacrifice everything to health. Sacrifice health to nothing.

Health is not to be sacrificed, but put to service. It is the bounding pulse that does the work and the thinking of the world. All

great schemes of improvement and reform are projected and executed by health. There is a difference between not being sick and being abundant in health. A man to perform much must not be merely free from disease, but he must have immense vitality. He must be able to sleep well, and eat well, and assimilate well. He must be possessed of plus animal life and spirits. Then working, planning and creating, are means of the highest pleasure. Many good things are written about the rules of Hygiene; gymnastic schools are established in cultivated society everywhere; but when everything has been said and done that art and science can do, the results are put in the shade by what farming does in promoting health and vital energy in the farmer. The employment of the farmer gives him in his varied labors just the exercise that develop harmoniously the muscular system. The vital energies are augmented by constant exercise in the open air. He becomes used to all kinds of weather and all degrees of cold and heat, until the vital powers of the system can not only defy rain, snow, hail and wind, but use them in enhancing their own powers. The cold that drives the city boy shivering into the house, causes the farmer's boy to leap and laugh with physical joy. To the latter the coldest January morning is the most exhilirating stimulant.

Second. Farming promotes a manly feeling of freedom and independence. He that has conquered severe climates and the hostile elements, is not to crouch before crowned heads or earthly sceptres. Nature is free, and the farmer who has dealt with her until she has imparted to him not only the fruits of her field, but the free atmosphere of her mountains, and the spirit of her laws which spurn at human control, will never bow beneath the yoke of tyranny. Nature is self-reliant and so is the farmer. He would rather die than beg. This feeling grows out of no false pride, but from the lesson Nature has taught him, to earn what he would possess. That in the farmer's hands which he has not earned, is to him a coal of fire. Nature allows no shams, and the farmer can allow nothing which looks like mere ostentation and display. To him, use and beauty are always combined. He loves to have things exact. He wants pay for just what he parts with, and nothing more. It is not the farmer's half-bushel which has a false bottom in it. Exact weights and measures are his especial delight. The farmer sometimes attempts to cheat the speculator, I am aware; but he learned the lesson, not from his employment, but from having often traded with the speculator. I think it was Napoleon who said, "Do not go to war too often with the same nation, or you will teach them your art, of which they will take advantage, to your hurt." I have sometimes thought this caution might apply with equal force to speculators concerning their deal with farmers. Plain dealing, plain words, and plain dress characterize the farmer; for Nature has taught him to be like herself—simple.

Third. The pursuit of agriculture tends to develop the intellectual faculties. There is a notion current in the popular mind that a man who cannot succeed in any other pursuit should be a farmer; but this is a sad mistake. There is no pursuit that requires a fuller share

of the elements of success. The farmer must have practical intellect, accurate judgment, and keen perception. Men of less practical ability may follow some business that requires the same strokes every day until it becomes a routine, and they follow it with as little thought as the horse moves in the tread-mill. But the farmer is obliged to think about his work every day and every hour. His judgment must be good, for he must trade as well as work, and a few poor trades are fatal to his success. He must also be capable of laying plans for the future. It is a common remark among farmers, "He was good to work, but had little calculation, and failed to pay for his farm."

Farming is most emphatically a mathematical business. No man needs a scientific education more than the farmer. The farmer must be what is termed a posted man. He must understand the practical questions of the day, because there is hardly a question of the times that does not affect the market. He must have a keen foresight, that he may be able to decide whether dairying or wool-growing will be most profitable for the next five years. The successful farmer must be a man of the most unfaltering perseverance; for his money is made slowly, and by careful, patient endeavor, year after year. The hot blood and fever pulse of ambition are of little account to him.

Let no man advise an enterprising and gifted young man to go into some business above farming, for there is nothing *above* farming. The work of the farmer educates the worker. A striking example of this is found in the effect this pursuit has upon our Irish immigrants. They come here with spirits crushed by ages of tyranny, bearing upon their brows the impress of the iron heel of despotism. Yet a few years residence upon our freer soil, under the influence of our free institutions, develops some of the noblest specimens of manhood. But this is more apparent among those who select farming as a pursuit, than among those who take some other branch of employment. Notwithstanding the truth of all we have said for agriculture, it is nevertheless true that, farming to-day. is not what reason teaches it ought to be. It is a business of which the resources are yet latent, and they remain latent, in great part, from the fact that mechanics and trade are draining the farms of the chief enterprise of the country. Young men aspire to some other business, at which they can get rich faster, and thus farming is left to the unenterprising and the immigrants.

Farming requires the application of more thought. Thought discovered a new Massachusetts under the old Mass. Thought has put the plowshare beneath old New England, developing the rich sub-soil, so we have a new New England and this soil of the new N. E. is found to be richer than that of the old N. E. Drainage has discovered the best soil where it was supposed nothing more useful than alders would grow; and irrigation defies the drought caused by the clearing away of the forest. But there is another problem to be solved— It is, what shall recompense the soil for the constant drainage of her wealth in the products that go to supply our manufacturing towns? When we look into the east, at the exhausted soil of Assyria, and then at the process that is rapidly bringing our own soil into the same con-

dition, the contemplation seems alarming. Look at Boston with its quarter of a million of inhabitants, besides the horses kept there; at New York with one million of inhabitants, and then at the smaller cities and villages, and you see at once that they are devouring all the wealth of the soil at a rapid rate, because for all the provisions they take from the soil they give nothing back; but all the manure which should be produced by this consumption is carried off through the sewers into that great wash-bowl—the sea. Here is a vital question, upon which every other question that pertains to the well-being of humanity, hinges. How shall this tide of sewerage be turned back to the soil whence it came? Assyria gives us the picture, in her sparse, sick, starving inhabitants, of what this whole beautiful continent, so full of health, wealth and intelligence must, though not in our day, ultimately become, unless some system of fertilization shall be developed, which shall give the soil as much richness as has been taken from it. If this process of exhaustion, now going forward, is allowed to continue, it will come to that, at last, that nothing but a great upheaval of old Ocean's bed, forming new continents laden with that rich deposit, which has been accumulating for ages, can perpetuate the habitability of the Earth. Geologists teach us that such upheavals have taken place in the past, but that the Earth's crust is so thick they never can again.

Fourth. The pursuit of agriculture develops the poetical sentiment. The farmer does not write his lines in ink on paper, but on broad lands with plow and spade. His imagination is inspired by the growth of vegetation, the waving of grain, and the development of animal life, as he sees these things on the farm. Farming does not develop that dry, utilitarian life that many think it does. No other pursuit has so much of the spirit of poetry in it. Who is that poet who, above all others, carries cheer to the hearts of the people of Scotland, England and America? It is he who said "Thankit be God I can plow." Burns was the farmer poet. Margaret Fuller, in a critique of hers, on the earlier poems of Longfellow, said, in substance, that his verses were inspired by the study, and not the field. But Robert Burns was the genuine son of the soil, and his immortal lines are true to nature, and thrill a responsive chord in the heart of every one of her lovers.

6th. The pursuit of farming develops a healthy moral sentiment. Many who leave a country life in youth to enter the more public walks of life, and gain wealth and distinction afterwards, do so oftentimes at the expense of those moral qualities which could have been better preserved on the farm. The course of James Fisk is an illustration of this—his own words judging him—when he said, for a long time the only alternative before him was a prison or a palace. Nature is moral, and she breathes morality into those who work and commune with her. The success of business and professional men is more nearly related to morality than every one thinks. Nothing develops the elements of succees like agriculture. Most of our distinguished Senators are the sons of farmers. In the face of the immortal Webster you could see the mountains of his native New Hampshire. Finally, we

affirm that the pursuit of agriculture tends to develop the religious sentiment. Nobody so well as the farmer knows that God is the source of every material blessing. The mechanic or the merchant when he purchases bread looks upon it as that which dollars and cents buy. The farmer knows that his field of grain was not bought with money, but "It is God that giveth the increase." Of all our anniversaries, none so important as fast and thanksgiving days. The observance of one day in every year for public fast had its origin in Egypt in a remote period of human history. The ancients fasted and prayed, just as the days were the shortest, when, as they thought, the sun had been dragged by the powers of darkness far down in the south, that God would bring back the sun, and thus insure them another harvest, and save them from starvation. Then, as now, agriculture taught men to fast and pray. The custom of thanksgiving holds a prominent place in the hearts of the people. Once a year our New England families are gathered around the family board, and at this time, if at no other, we feel that it is God who has given us this bountiful harvest for which a day has been appointed of thanksgiving and praise. All feel then that the abundance they enjoy is not merely the reward of toil, but that which they receive only by the grace of God. Thus we are led to say, others may be good, in spite of their occupation, but the very toil and experience of the farmer teaches him the great truths of religion and morality.

PRIZE ESSAY

BY L. B. CASWELL, FITCHBURG.

OUR FORESTS.

The destruction of our forests by the woodman's axe and the devouring fire, is at last making itself felt in the climate, the scenery, and the industries of our country. When the early settlers of America first reared their homes on these shores, they found a land of grand old forests; stretching far back towards the interior of the continent, was the virgin forest in all its beauty of form and color, covering mountains, hill and valley with its luxuriant growth. Here the majestic oak, the noble pine and beautiful maple flourished in their native wildness, and covered the land with "the noblest and proudest drapery that sets off the figure of our fair planet." But these forests must fall, that the rich soil beneath, teeming with the elements of fertility, which had been accumulating for ages in the vast laboratory of Nature, might be made available for the production of food for our ancestors and their flocks and herds. Necessity compelled our forefathers to clear away these forests, but we, with seeming thoughtlessness, are denuding the hill-tops and stripping the mountain-sides without considering the effect which such a course will have upon the future of our country.

The functions which the forests perform in the economy of Nature are vast and varied. They are the great fertilizers of the soil and modifiers of climate, while their value to us for timber and fuel can not be estimated. In an aesthetic point of view they are not to be ignored; they give an added beauty to the landscape, an indescribable charm which nothing else in Nature can bestow There is no other agent of Nature which is so intimately connected with the health and comfort of man, so necessary to the continued fertility of the soil, as the forest trees, yet we may venture to assert that no subject has been so neglected, as that of the cultivation and growth of trees.

We of New England, living in that part of the land of which it is said that "there is not another equal area of the earth's surface whereon so many kinds of valuable trees grow spontaneously and rapidly," can hardly realize the want of them. But go to the treeless prairies of the West, stand amid those fertile fields, behold on every side the boundless expanse terminated only by the distant horizon, with not a tree to break the monotony; travel for days over the prairies with no cooling shade, no barrier to protect from the sweeping winds; do this and you will realize as never before the value of trees, and will thank your Heavenly Father for the groves and forests of your own New England. But our woodlands are rapidly disappearing. The forests of Maine, which in times past have furnisheh the principal part of the lumber consumed in the United States and the West Indies have nearly disappeared, and the rapacious lumberman seeks for fresh conquests amid the timber lands of Canada, Michigan and Wisconsin.

Many cities and towns are now obliged to depend upon places more than 1000 miles distant for their supply of timber.

Few seem to be aware to what an extent we are dependent upon the supply of wood and timber for the comforts and even necessities of civilized life. There is hardly a trade or manufacture but requires its use. Bernard Palissy says, "I have divers times thought to set down in writing the arts which shall perish when there shall be no more wood; but when I had written down a great number, I did perceive that there could be no end of my writing, and having diligently considered, I found there was not any which could be followed without wood." The houses we live in, the furniture we employ, the implements with which we work, the vehicles in which we ride, the fuel we burn; all of these are fast consuming our forests. Already 4,000,000 acres are annually disappearing to supply these various demands, while the vast extension of our railroad system, the great increase of manufactures and the mechanical arts are yearly augmenting the demand. It is estimated that the single item of repairing the timbers of existing railroads, requires the expenditure of $30,000,000 annually. More than $100,000,000 worth of sawed timber is consumed yearly, while for fuel $75,000,000 worth is burned every year, without mentioning the vast quantities used for various other purposes. While this enormous demand is constantly increasing, our supply is decreasing, and it needs not the eye of the prophet to behold in the near future an exhausted supply and a denuded country, unless the people arouse themselves for the protection of this most important crop.

Trees were not made merely to furnish us fuel and timber, fruit and shade, but for the influences they have upon the soil, crops and climate. There is in the study of Vegetable Physiology a broad field for investigation, through the intricate labyrinths of which, the diligent student of science may wander, ever finding something new to excite his thirst for knowledge. From the lowest shrub to the giant *Sequoia*, there are influences at work upon the soil beneath, and the air above us, the silent workings of which we seldom notice. One of the hardest things for our people to learn is the climatic value of trees, yet History and Science teach us that they are most intimately connected with the climate of all countries. The influence which the forests exert on the humidity of the earth and air, on temperature and precipitation is immense. Spread out between the sky and earth, they prevent the rays of the sun from reaching the ground, and evaporating too rapidly the water which falls. The *humus*, or vegetable mould formed by the forests is capable of absorbing almost twice its own weight of water, thus they act as a sponge, and retaining a large part of the rainfall, allow it to pass off gradually into the brooks and rivers which water the surrounding country. It is also observed by eminent investigators, that a greater amount of rain falls in wooded than in cleared districts; as the lightning rod abstracts the electric fluid from the stormy sky, so the forest attracts to itself the rain from the clouds. They also ensure the permanence and regularity of natural springs, and the watercourses fed by them.

Now let us notice the changes produced by the destruction of the forest. Evaporation increases with great rapidity ; the soil is no longer a sponge but a dust heap, and the rain which falls, hurries over it carrying vast quantities of earthy matter into the valleys below, leaving the hillsides destitute of the elements of fertility ; the little streams that formerly came leaping and foaming from the wooded hillsides, are now only seen for a few months in the spring and autumn, and then there is nothing left of them but dry and pebbly beds ; springs are dried up, and rivers diminished in size ; bleak winds sweep unresisted from the denuded hill-tops, prostrating the farmer's grain and strewing the ground with his choicest fruits ; precipitation becomes irregular, now deluging the country with destructive freshets, and anon blighting the farmer's crops by parching droughts.

Have we presented these changes in too strong colors ? Read the history of the countries of the Old World, the theatre of man's operations for so many centuries. Compare the present condition of many of those countries with the description given by ancient historians and writers. Palestine, which the Bible cites as the most fertile land in the Universe, its mountain-tops covered with luxuriant forests, where flourished the Cedar of Lebanon, unrivalled in grandeur and beauty in the vegetable kingdom, its sloping hill-sides teeming with the olive and vine, the rich soil watered by the rains of Heaven, and the beautiful landscape of verdant height and fertile valley. This once fruitful land is now a scene of desolation, without commerce, arts, or agriculture. Its mountains are barren, the Cedars have disappeared, and it is now deprived of vegetation and water because her forests were destroyed.

Classic Italy, proud Spain, and beautiful France are to-day reaping the results of this thoughtless destruction of their woodlands. From the barren plateaus of the Alps, Pyrenees and Appenines, burst forth fierce torrents, spreading wild desolation in their path and laying waste the fertile fields of whole provinces. Districts that formerly contained the most fertile land and a dense population, have become almost a barren waste deserted by man.

Rivers famous in History have shrunk into brooks and even disappeared. The poet Addison refers to this fact during his travels in Italy, in one of his poems.

> "Sometimes misguided by the tuneful throng,
> I look for streams immortalized in song,
> That lost in silence and oblivion lie,—
> *Dumb are their fountains and their channels dry.*"

The ancient river Scamander which was navigable at the commencement of the Christian Era, has completely disappeared with the Cedars of Mount Ida, where it took its rise.

Not only in the Old World are these destructive results felt, but they are beginning to be seen in America. Prescott, in his "Conquest of Mexico" says : "In the time of the Aztecs, the table-land was thickly covered with larch, oak, cypress, and other forest trees, the extraordinary dimensions of some of which, remaining to the present day, show that the curse of barrenness in later times is chargeable

more on man than on Nature." The Ohio River is dwindlig in size, because the forests of Ohio and Pennsylvania are disappearing. Our Atlantic States, are also beginning to feel the effects of the too rapid destruction of their woodlands, and it is a common observation that our summers are become drier,and our streams smaller. There are many streams that a century ago were capable of turning mills that can do so no longer. But if our country is exempt from the terrible calamities which inundations and droughts have brought upon some of the fairest portions of the Old World, we may ascribe it to the fact, that we have not as yet bared the sources of all our streams, nor stripped the mountains entirely of their natural covering.

European countries felt the necessity of forest planting many years ago, and the laws of almost every state of Europe more or less adequately secure the permanence of the forest. England and Scotland can boast their thousands of acres of majestic pines, larches and oaks, while the artificial forests of France, Austria, and Russia rank among the most valuable government property of those countries. Germany has imported thousands of dollars worth of seeds of the valuable redwood from California, and the young forests growing from them are the pride of that nation. She has also established special departments for forest culture with the schools, necessary to educate the officers in their duties of cultivating and protecting trees. Spain is said to be the only European land that makes no provisions for its forests. The Spaniard's "hatred of a tree" is proverbial, and they have reduced their once fertile and beautiful country, to one renowned for its extreme aridity and desolate appearance. Eminent writers and scientific men of France and Germany have written and studied upon the forests and their influences, until the science of Sylviculture is acknowledged in those countries as of the greatest importance.

The proportion of woodland required for an agricultural country, according to Rentzsch, is 23 per cent. for the interior and 20 per cent. near the coast. Of all the countries of Europe, not more than four or five have over 23 per cent. while some are reduced as low as 5 per cent. For the whole of Europe the proportion is but $26\frac{1}{4}$ per cent., while in the United States and Canada it is as high as 48; but while in Europe the proportion is increasing, with us it is decreasing. If we proceed with the destruction of our timber lands at the rate with which they have disappeared for the last eighty years, we shall in less than thirty years reduce our proportion of timber to but 30 per cent.

There are thousands of acres in New England fit for no other use than to grow wood. If the farmers of Massachusetts, and all our Eastern States would restore their rough and rocky fields and steep hill-sides to forest growth, and expend their time on half the land they are now trying to cultivate, they would be far better off than they are to day, both physically and financially. The East needs a work of restoration, and the West a new creation. Let our New England hills and mountains again be clothed with forests, and the fertile prairies of the great interior dotted with groves and woodland until they shall

become still more beautiful and fruitful. Let the now barren and desolate plains of the Far West be planted with trees, until the future years shall behold them covered with fruitful farms and the happy abodes of a grand civilization.

Our Agricultural Societies can help along this great work, by offering suitable premiums for plantations of forest trees. Many of them have done this, but more needs to be done in this direction.

Our State Governments can aid, by exempting standing forests from taxation, by imposing taxes on wood felled for fuel or timber, and by offering premiums for the planting of trees. Some of our Western States have already done this, and others are about to do so; but above all we must look to the general diffusion of knowledge among the people on this subject. The American is reluctant to invest in anything that does not yield a quick return in dollars and cents. The forces of Nature act too slowly for him, and he hesitates to plant trees because he may not himself receive the benefit of them; but he who plants a tree must be actuated by higher motives than that of direct pecuniary gain.

The preservation and planting of trees is a duty that we owe to the memory of our ancestors who have left us the waving elms and wide-spreading maples of our New England homes. It is a duty that we owe to the posterity that shall come after us when we shall have passed from the stage of life. May we so perform that duty that we can truly utter that beautiful sentiment of the poet Whittier.

"Give fools their gold, and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.

For he who blesses most is blest;
And God and man shall own his worth
Who toils to leave as his bequest,
An added beauty to the earth."

REPORTS OF COMMITTEES.

THOROUGH-BRED STOCK.

Your Committee on Thoroughbred Stock, have attended to their duty and submit the following report:

SHORTHORNS—HERDS.

Augustus Whitman, 1st premium,	$12 00
Joel Page, 2d prem.,	8 00

BULLS.

Augustus Whitman, 1st prem.,	8 00
J. P. Putnam, 2d prem.,	5 00

YEARLING BULLS.

Augustus Whitman, 1st prem.,	6 00
Joel Page, 2d prem.,	4 00

COWS.

Augustus Whitman, 1st prem.,	6 00
" " 2d prem.,	4 00

HEIFERS THREE YEARS OLD.

Augustus Whitman, 1st prem.,	5 00
Joel Page, 2d prem.,	3 00

HEIFERS TWO YEARS OLD.

Augustus Whitman, 1st prem.,	4 00

HEIFERS ONE YEAR OLD.

Augustus Whitman, 1st prem.,	3 00
" " 2d prem.,	2 00

CALVES.

Augustus Whitman, 1st prem.,	3 00
" " 2d prem.,	2 00

MASSACHUSETTS AGRICULTURAL COLLEGE

AYRSHIRES—HERDS.

E. T. Miles, 1st, prem., 12 00

BULLS.

E. T. Miles, 1st prem., 8 00
Sterling Blood Stock Club, 2d prem., 5 00

BULL CALVES.

E. T. Miles, 1st prem., 5 00

COWS.

E. T. Miles, 1st prem., 6 00
" " 2d prem., 4 00

HEIFERS THREE YEARS OLD.

E. T. Miles, 1st prem., 5 00

HEIFERS TWO YEARS OLD.

E. T. Miles, 1st prem., 4 00
" " 2d prem., 2 00

YEARLING HEIFERS.

E. T. Miles, 1st prem., 3 00
" " 2d prem., 2 00

CALVES.

E. T. Miles, 1st prem., 3 00
" " 2d prem., 2 00

JERSEYS—HERDS.

J. F. Brown, 1st prem., 12 00

BULLS.

J. F. Brown, 1st prem., 8 00

COWS.

J. F. Brown, 1st prem., 6 00
" " 2d prem., 4 00

HEIFERS THREE YEARS OLD.

J. F. Brown, 1st prem., 5 00
" " 2d prem., 3 00

HEIFERS TWO YEARS OLD.

J. F. Brown, 1st prem., 4 00
" " 2d prem., 2 00

YEARLINGS.

J. F. Brown, 1st prem.,	3 00
" " 2d prem.,	2 00

The Committee noticed some fine Jersey Stock entered by Lyman Nichols, Esq., but not being entered according to the rules of the Society, the Committee could not award any premiums—

And again, one Jersey Cow and Heifer, very fine animals, owned by John H. Lockey, Esq. of Leominster, were not entered for premium.

(*Signed*) E. D. WORKS, *Chairman.*

MILCH KINE.

The Committee on Milch Kine report as follows:

HERDS OF FOUR COWS.

Joel Page, Fitchburg, 1st prem.,	$10 00
A. Gates, N. Leominster, 2d prem.,	7 00

SINGLE MILCH COWS.

Joel Page, Fitchburg, 1st prem. for his cow "Topsy 3d," ⅞ Durham, 4 years old,	5 00
A. Gates, N. Leominster, 2d prem. for his cow, 7 yrs. old,	4 00

HEIFERS THREE YEARS OLD.

Joel Page, Fitchburg, 1st prem.,	5 00
A. Gates, N. Leominster, 2d prem.,	4 00

The Committee felt obliged to withhold the 1st premium for a nice two year old heifer, grade Ayrshire, with calf two weeks old by her side, entered by E. T. Miles, Fitchburg, in consequence of her not having been tested according to the Rules of the Society.

For the Committee,
C. K. SAWYER, *Acting Chairman.*

HEIFERS.

The Committee on Heifers submit the following report:

We find but one 2-years-old on exhibition, and award the 1st prem. to George L. Rice, Leominster.

YEARLINGS.

J. B. Smead, 1st prem.,	$3 00
George L. Rice, 2d prem.,	2 00

N. B. REED, *for the Committee.*

HEIFER CALVES.

The Committee on Heifer Calves, having attended to their duty, submit the following report :

S. F. Whitney, Harvard, 1st prem.,	$4 00
" " 2d prem.,	3 00
We also recommend to Joel Page a gratuity of	3 00

THOMAS SHELDON, *Chairman.*

YEARLING STEERS AND STEER CALVES.

The Committee award the following premiums :

YEARLING STEERS.

Henry A. Woods, Leominster, 1st premium,	$3 00

STEER CALVES.

Lyman Nichols, Fitchburg, 1st premium,	6 00

S. G. MIRICK, *for the Committee.*

PENS OF CALVES.

The Committee on Pens of Calves make the following report :

Augustus Whitman, Leominster, 1st premium,	$10 00
Lyman Nichols, Fitchburg, 2d prem.,	5 00

E. F. BAILEY, *Chairman.*

WORKING OXEN—SINGLE TEAMS.

The Committee to whom was assigned the duty of awarding Premiums upon Working Oxen, Single Teams, have attended to that duty and beg leave to report as follows:

There were but 4 entries, and your Committee were highly pleased with the work performed, and were unanimous in awarding the following Premiums:

Henry A. Woods, Leominster, 1st premium,	$7 00
N. B. Reed, Princeton, 2d prem.,	6 00
W. W. Shattuck, Fitchburg, 3d prem.,	5 00
Cyrus Kilburn, Lunenburg, 4th prem.,	4 00

Which is respectfully submitted,

FRANKLIN NOURSE, *for Committee.*

WORKING OXEN AND HORSE.

The Committee having attended to their duties would respectfully submit the following:

N. B. Beed, Princeton, 1st premium,	$7 00
W. W. Shattuck, Fitchburg, gratuity for one yoke of oxen,	4 00

D. C. MILES, *for Committee.*

STEERS MORE THAN TWO YEARS OLD.

The Committee on Steers make the following report:

Henry Woods, Leominster, best trained steers, 1st prem.,	$4 00

JOSIAH PUFFER, *for Committee.*

FAT CATTLE.

The Committee award the following premiums:

Joseph Cushing, Fitchburg, 1st premium,	$8 00
N. B. Reed, Princeton, 2d prem.,	5 00

ABEL DERBY, *Chairman.*

SWINE.

The Committee on Swine have attended to their duty, and would respectfully submit the following report:

BOARS MORE THAN ONE YEAR OLD.

Timothy Lincoln, Leominster, 1st prem.,	$4 00
S. F. Whitney, Harvard, 2d prem.,	3 00

BOARS LESS THAN ONE YEAR.

Lyman Nichols, Fitchburg, 1st prem.,	3 00

FAT HOGS.

C. C. Boyden, Leominster, 1st prem.,	8 00
Timothy Lincoln, " 2d prem.,	4 00

FAT PIGS.

Lyman Nichols, Fitchburg, 1st prem.,	4 00
" " 2d prem.,	2 00

BREEDING SOWS.

C. C. Boyden, Leominster, 2d prem.,	4 00

WINCHESTER WYMAN, *for the Committee.*

SHEEP.

The Committee appointed by the Trustees of the Worcester North Agricultural Society having attended to their duty, respectfully submit the following report:

There probably are but few, if any, subjects relating to Agriculture upon which more has been written, or the fever raged higher during

past years, than that of Sheep Husbandry; in many cases almost fabulous prices being paid for choice animals. We do not intend to enter into a discussion of the merits of the different breeds, leaving that for abler hands, but simply to look at the subject as it stands connected with this locality, and notice some of the causes of its decline.

Since the commencement of the present century a great change has taken place in the business of the country. At that time manufacturing and mechanical business was in its infancy; agriculture was the leading pursuit; there was comparatively but little money in circulation; no home markets where the farmer could sell his produce, he was obliged to rely upon the resources of his farm not only for the provision for the support of himself and family, but also for the articles from which their clothing and many other things were made. Hence every farm, however small, would have its patch of flax and its flock of sheep, and, as the summer wore away, there was hurrying to get the wool carded and spun, the cloth woven and dressed, in season for the children's clothes for winter schools—the boys with their cow-hide boots and stout suit of clothes, the girls with their thick calf-skin shoes and warm woolen dresses, and long, checked aprons, all made from the products of their father's farm. Then in the spring time the lambs could be seen skipping and frolicking and the bleating of sheep heard upon every hillside and in every valley, while now the sight of a sheep or lamb is about as much an object of curiosity to the younger children as the lions and monkeys in a travelling menagerie; and your Committee found upon receiving their books with eight premiums offered on sheep, including twenty-eight animals, but three entered, only two of which made their appearance.

The large increase of manufacturing and mechanical business in the eastern part of Massachusetts, and the rapid growth of population in consequence, has made it for the interest of the farmer of this section to produce those articles which cannot be transported a great distance, hence the making of milk has become the leading object, with raising of vegetables, the small fruits, and hay; while the facilities given to transportation by the power of steam are such that he cannot compete in the raising of wool with the farmer of the western prairies or California, or of the foreign countries of South America and Australia, where sheep are kept in flocks of thousands, on government lands, procuring their subsistence from the pasture the year round, being shorn of their fleeces twice a year.

Another cause of the decline is the cost of fencing, most of the fence in this vicinity being stone wall.

Now, a stone wall is about as much a barrier against sheep as a picket fence would be to dam a stream of water, unless made after the Irishman's model—which was post and rails at the bottom, with stone wall on top. A brush or wooden fence of some kind being best, makes it too expensive here, while in the northern part of New England, where wood and timber are plenty, it is the best and cheapest they can make.

One other cause of the decline is the danger of damage by dogs,

which often make sad havoc with the few that are kept. The year 1871 was very disastrous to the owners of sheep in this vicinity, the flock of Mr. McIntire, which has often taken your premium, with others, being completely broken up, besides many single animals being killed. There cannot be much inducement for any one to go to the trouble and expense of raising a nice flock of sheep, knowing that he is liable, any night, to have the objects of his tender care torn, mangled and killed.

The only inducements there appear to be to the raising of sheep in this vicinity are the raising of early lambs of some of the larger and coarse wooled breeds for the market, which at present command so high a price as to be beyond the reach of many people to purchase. By keeping principally milch cows, our pastures have deteriorated in value—in many cases nearly worn out—becoming overrun with bushes and briars, and consequently will not keep the stock they formerly did, and are less profitable.

Now, it is admitted by those who have had experience, that sheep will improve such pastures by killing many of the bushes and briars by feeding, and by the more even distribution of their droppings over the land than other stock, at a less cost than any other method. It is an subject worthy of the consideration of our farmers whether a change in some instances would not be for their advantage.

Your Committee award the second premium on Cossets to James McIntire, Fitchburg, $1 00

For the Committee,
NATHAN CASWELL, *Chairman.*

The following communication has been received from the Executive of the United States Centennial Commission, and is published by vote of the Trustees:

1776. Internat'l Exhibition, Philadelphia. 1876.

Office of the U. S. Centennial Commissio
Philadelphia, Pa., October, 1872.

Worcester North Agricultural Society, George S. Houghton, Sec'y, Fitchburg, Mass.

The Anniversary of the Independence of the United States in the year 1876, is to be celebrated by an exhibition of the products, arts, and industries of the country, and of the world. This is in accordance

with an Act of Congress approved March 3d, 1871. By this act, the task of preparing and superintending the exhibition was imposed upon the United States Centennial Commission, consisting of two members from each of the states and territories. The Commissioners have twice met in general session, a permanent organization has been effected, and the chief outlines of the plan for the exhibition have been agreed upon.

This exhibition is to be international and universal—international, inasmuch as all nations will be invited to participate in it; and universal, because it will include a representation of all natural and artificial products, all arts, industries and manufactures, and all the varied results of human skill, thought, and imagination.

The outlines of a simple yet comprehensive classification have been adopted. There will be ten departments, each subdivided in ten groups, and these again into classes. The details of this classification are now being elaborated and will be published in due season, together with such rules and regulations as may be found necessary for the proper conduct and management of the exhibition.

It is intended that ample space shall be assigned to each state, territory, and foreign country, for a just and proper display of their products. It is believed that not less than fifty square acres of floor space under roof, will be required for this purpose. A site combining the advantages of a sufficient extent of level ground, with picturesque and cultivated surroundings, easy of access by rail, water, and by ordinary roads, has been assigned for the buildings and grounds at Fairmount Park, in the City of Philadelphia. The exhibition will open in April, and close in October.

Each State of the Union will be expected to send its peculiar products, illustrating its resources, both developed and undeveloped. A complete exhibition of this kind by all the States, will afford the means of comparing their industrial condition and capabilities. The products of mining and of agriculture will occupy a large portion of the space allotted to each state, and will receive their just share of attention in this universal display.

An undertaking so patriotic in its conception, so vast in its proportions, and so useful in its results, commends itself to the hearty sympathy and support of an intelligent people. Patriotism, as well as an appreciation of the industrial, educational, and moral influences of well organized exhibitions, should impel all citizens to lend a helping hand. It is the duty of the Commission to prepare the way and open the doors, but the people, in their sovereign right and strength, must make the exhibition. By their aid, alone, can it be made a just and comprehensive display of the industrial, intellectual, and moral development of the Nation during the first century of its existence.

The Commission not only relies with confidence upon the aid of the people in general, but it hopes to receive the co-operation of the many state societies and organizations which for so many years have aided in directing and realizing the popular demand for agricultural and industrial exhibitions. The desire to secure, at an early date, your efficient co-operation, has led to this communication, which is made at the request of the Executive Committee of the Commission.

Permit me, in closing, to suggest that the facts herein stated might, with great advantage to the exhibition, be communicated as publicly as possible to your members and exhibitors, and that, if agreeable, they should be incorporated in your printed reports. A committee of your members might be appointed to consider and suggest such measures as may appear most desirable to promote the success of the object for which the Centennial Commission is appointed. A general plan for the

organization of Co-operative Centennial Associations in the several states and territories is now under consideration, and when perfected will be published for distribution.

Very Respectfully,
Your Obedient Servant,
WM. PHIPPS BLAKE,
Executive Commissioner.

POULTRY.

Your Committee award the following premiums:

BRAHMAS.	
Ephraim Whitman, Fitchburg, 1st premium,	$2 00
William A. Carleton, Fitchburg, 2d prem.,	1 00
BLACK SPANISH.	
John F. Brown, Lunenburg, 1st prem.,	2 00
J. A. Marshall, Leominster, 2d prem.,	1 00
WHITE LEGHORNS.	
Wm. A. Carleton, Fitchburg, 1st prem.,	2 00
J. F. Brown, Lunenburg, 2d prem.,	1 00
BROWN LEGHORNS.	
Wm. A. Carleton, Fitchburg, 1st prem.,	2 00
E. Whitman, Fitchburg, 2d prem.,	1 00
HOUDANS.	
John H. Lockey, Leominster, 1st premium,	2 00
PLYMOUTH ROCK.	
Wm. A. Carleton, Fitchburg, 1st prem.,	2 00
SILVER PENCILLED HAMBURGS.	
J. F. Brown, Lunenburg, 1st premium,	2 00
PARTRIDGE COCHINS.	
Ephraim Whitman, Fitchburg, 2d prem.,	1 00
NATIVE.	
T. D. Wood, No. Leominster, 1st premium,	2 00
TURKEYS.	
W. W. Shattuck, Fitchburg, 1st premium,	3 00
J. F. Brown, Lunenburg, 2d premium,	2 00

GEESE.

T. D. Wood, No. Leominster, 1st premium,	3 00
L. H. Butterfield, Fitchburg, 2d premium,	2 00

DUCKS—(ROUEN).

Aaron P. Whitney, Lunenburg, 1st premium,	3 00

STILLMAN HAYNES, *for the Committee.*

TOWN TEAMS.

Your Committee on Town Teams have attended to the duty assigned them, and report:

Only one entry was made, and that from Leominster by H. A. Woods. We unanimously award:

Town of Leominster, 1st premium, $30 00

We exceedingly regret that lack of interest which pervades the Agricultural community, in the use of Oxen for Farm work. Horses are preferred on many farms, because they are more fleet in their motions; their owners forgetting that, should an accident happen to them, or old age render them useless for labor, their hides and shoes would constitute their whole value. Whereas, Oxen require much less expense for harness than Horses, and when old, have a value for the shambles. Many farms have lands on which oxen can do the work much better than horses, such as miry, rocky or stumpy land, and on steep hill-sides, and on our New England farms as well as in Old England, as has been sung—

"How jocund did they drive their teams afield."

The ox is a noble animal, and when "The Society for the Prevention of Cruelty to Animals," shall fulfil its mission, he will not have more occasion to despise his master.

If the prophet Elisha plowed with twelve yoke of oxen in olden time, the Yankee has made such improvement in his yokes and plows, as to do the same work with one yoke of oxen; and we have no intimation that the soil of the Oriental country is more stubborn than that of the Occidental. And we think that oxen may be kept more cheaply than horses.

Our good neighbors of Leominster, who always abound in good works, exhibited a Team of 17 yoke of stalwart oxen, that would draw encomium at any Fair in New England, and added much to the Show.

It is much more pleasant to award premiums, when there is a good wholesome competition, when there is fair play for the exercise of sound judgment and good taste, than on a single exhibition; which suggests a couplet from Hudibras—

"Where only one side gives the blows,
There's no fighting everybody knows."

Let this masterly inactivity in other towns be turned into good account at our next annual Exhibition, and we will shout, Well done!

For the Committee,
CYRUS KILBURN, *Chairman.*

FOOT RACE.

The Committee on the Foot Race, First Day, submit thef ollowing report:

There were four entries—H. W. Manning, John Morris, Orin M. Lowe, Frederic Goodrich. We award:

H. W. Manning, who came in first, in 2.32, 1st premium,	$10 00
Frederick Goodrich, who came in second, 2d prem.,	6 00

For the Committee,
C. H. B. SNOW, *Chairman.*

The Committee on the Foot Race, Second Day, would submit the following report:

There were six entries—Patrick Holihan, Orin Lowe, Alonzo Freeman, Chas. McGinnis, Wm. McGill and Geo. Rice. We award:

Wm. McGill, who came in first, in 2.32, 1st prem.,	10 00
Patrick Holihan, who came in second, 2d prem.,	6 00

SACK RACE.

The Committee on the Sack Race, submit the following report:

C. E. Farnham, 1st prem.,	$4 00
L. W. Goodell, 2d prem.,	3 00
Jas. Finan, 3d prem.,	2 00
Chas Rose, 4th prem.,	1 00

For the Committee,
GEO. B. PROCTOR, *Chairman.*

GENTLEMEN'S DRIVING HORSES.

The Committee on Gentlemen's Driving Horses, make the following awards:

H. G. Morse, Fitchburg, 1st premium,	$10 00
C. H. Brown, Fitchburg, 2d prem.,	5 00
A. Whitman, Leominster, gratuity,	5 00
G. G. Ruggles, Fitchburg, gratuity,	5 00
J. H. Marshall, Leominster, gratuity for a fine 4-years-old Colt,	5 00

The Committee regret that so small a sum of money was placed at their disposal, as many valuable Horses were on exhibition. They would recommend a larger sum in future for this class of Horses. In our opinion this might be made the most interesting part of the Show.

In the class of Walking Horses, there were but two entries—"Red Mike" and "Black Junior," both owned by Joseph Cushing of Fitahburg. We award:

"Red Mike," 1st premium,	10 00
"Black Junior," 2d prem,,	5 00

RODNEY WALLACE, *Chairman.*

MATCHED DRIVING HORSES.

The Committee on Matched Driving Horses have attended to that duty and report as follows:

Alvah Crocker, Fitchburg, 1st premium,	$10 00
Geo. Jewett, Fitchburg, 2d prem.,	5 00

The Committee also award, for their pairs of Matched Driving Horses, gratuities as follows:

H. A. Hatch, Fitchburg,	$5 00
Augustus Whitman, Leominster,	5 00

OHIO WHITNEY, *Chairman.*

FAMILY HORSES—SINGLE.

The Committee on Family Horses, Single, have attended to their duty, and award:

H. A. Blood, Fitchburg, 1st premium,	$6 00
H. G. Morse, Fitchburg, 2d premium,	4 00

F. W. WRIGHT, *Chairman.*

COLTS.

Your Committee on Three-years-old Stallions and Geldings and Fillies, Two-years-old Colts, and Yearlings, submit the following report:

There were three Stallions entered.

Lyman Patch, Fitchburg, 1st premium,	$10 00
Dr. M. Wallace, Ashburnham, 2d prem.,	5 00

There was but one Three-years-old Gelding entered.

M. S. Heath, Lunenburg, 1st prem.,	10 00

There was but one Two-years-old Colt entered.

J. H. Marshall, Leominster, 1st prem.,	6 00

Of Yearlings there were three entered. Your Committee award:

James Hannegan, Fitchburg, 1st prem.,	5 00
M. S. Heath, Lunenburg, 2d prem.,	3 00

J. L. PIPER, *Chairman.*

STALLIONS.

The Committee on Stallions, respectfully present the following report:

Number of Stallions entered, one.

H. H. Brown entered his Stallion, "Black Hawk," but showed none of his stock. The requisitions not being fulfilled, the Committee make no award.

GEORGE JEWETT, *Chairman.*

MARES AND SUCKING COLTS.

Your Committee on Mares and Sucking Colts, having attended to the duty assigned them, beg leave to submit the following report:

We found but few entries made in either Mares or Colts. There was no Mare that we thought was entitled to the 1st premium. We award:

Joseph Marshall, Leominster, 2d premium,	$5 00

On Sucking Colts, we award:

Joseph Marshall, Leominster, 1st prem.,	$4 00
D. F. Holman, Fitchburg, 2d premium,	3 00

We also recommend a gratuity of $2.00 to be paid to Dr. Brigham of Fitchburg.

The few entries and the quality of both Mares and Colts, showed at once that but little interest was manifested in the Society, to make that improvement in raising Horses which that noble animal deserves, and it was evident to your Committee that there was some cause for it, and we are of opinion that there is, first, too small a premium offered by the Society to induce any one living at any distance from Fitchburg, to be at the trouble of taking a good Mare or Colt to the Exhibition. For the best Colt only the paltry sum of $4.00 is offered, which is only one-half as much as you offer for a Fat Hog, and the same as you offer for a Boar more than one year old, and the same as you offer for a Heifer Calf four months old. For a Foot Race one-half a mile, you offer $5.00. Let us see what is for the best interest of the Society, a fine Colt that when three or four years old would command from $200 $500 in the market, or a half-mile race of some half naked boy, or a Hog which is worth as much money the day he is exhibited as he ever will be, and still you offer for him, $8.00, and only $4.00 for the best Colt. Keep the Horses from your Exhibition, and a very small ground will accommodate all that will be likely to attend, in a very short time. Your Committee are all friends to that noble and almost indispensable animal, the Horse, and will do what they can, in their feeble manner, to bring him up to the standard he ought to have in the Worcester North Agricultural Society.

All of which is most respectfully submitted by

Your Committee,

WARREN SIMONDS, *Chairman.*

DRAUGHT HORSES.

The Committee on Draught Horses submit the following report:

DOUBLE TEAMS.

Levi Kendall, Fitchburg, 1st premium,	$6 00
S. M. & E. B. Dole, Fitchburg, 2d prem.,	4 00

SINGLE TEAMS.

George L. Rice, Leominster, 1st prem.,	5 00
Joel Page, Fitchburg, 2d prem.,	3 00

SOLON CARTER, *for the Committee.*

PLOWING—SINGLE TEAMS.

The Committee on Plowing by Single Teams have attended to their duty, and make the following awards:

W. W. Shattuck, Fitchburg, 1st premium,	$10 00
C. C. Boyden, Leominster, 2d prem.,	7 00
Joseph Cushing, Fitchburg, 3d prem.,	5 00

ALDEN DERBY, *for the Committee.*

PLOWING—HORSE TEAMS.

The Committee on Plowing Match, Horse Teams, report:

Eight Teams were entered for premium. We award:

Joel Page, Fitchburg, 1st premium,	$10 00
E. A. Goodrich, Fitchburg, 2d prem.,	7 00
N. B. Reed, Princeton, 3d prem.,	5 00

STEPHEN SHEPLEY, *Chairman.*

STOCK FOR EXHIBITION ONLY.

The Committee on Animals for Exhibition, report as follows:

Six Animals were entered—1 Bull, grade Durham, by Augustus Gates, Leominster, two years old, weighing 1330; also, 1 Jersey Bull, by Lyman Nichols, two years old, weighing 1130, and 1 Jersey Bull, one year old, weighing 650; also, 1 Heifer Calf, two months old, by Mr. Nichols.

Again, we noticed a fine Jersey Cow, 6 years old, and Heifer Calf 15 months old, by J. H. Lockey.

These animals, collectively and individually, added much to our Show and were highly creditable to the owners.

EPH'M GRAHAM, *for the Committee.*

GRAIN.

The Committee on grain submit the following report:

The whole number of entries is eight, all withdrawn except Solon Carter's.

CORN.

Solon Carter, Leominster, 1st premium, $10 00

The weight of corn on one square rod was 36 lbs.. equal to 102⅞ bushels per acre.

Oct 25th, the corn on 23 hills weighed,	gross,	50¼ lbs.
	tare,	4¾ "
	net,	45½ lbs.
Nov. 29th, the corn on 23 hills weighed,	gross,	46¾ lbs.
	tare,	4¾ "
	net,	42 lbs.
	cob,	⅛ 6 "
	corn,	36 lbs.

Shrinkage from Oct. 25th, to Nov. 29th, 3½ lbs.

RYE.

Solon Carter, Leominster, 1st prem., 4 00

The weight of rye on one square rod was 7½ lbs, equal to 21⅜ bushels per acre.

All of which is respectfully submitted,

E. BIRD, *for Committee.*

Statement of Solon Carter.

CORN.

The field of corn I enter for the premium of the Society was cultivated as follows: Ploughed the 13th and 15th of May, 7 inches deep; 15 loads of manure from barn cellar spread on the grass before plowing, and 10 loads spread on the furrows and harrowed thoroughly; marked out 3½ feet wide each way and planted with a double corn planter the 18th of May. It was cultivated both ways with horse-hoe three times, and hoed by hand but once. Top stalks cut in Sept., and harvested the last week in Oct.

Cost of seed and planting,	$1 30
Plowing and preparation,	9 00
Manure 25 loads,	75 00
Cultivating and harvesting,	22 00
	$107 30

Statement of Solon Carter.

RYE.

My field of rye was raised on land planted with corn in 1871. I sowed two bushels to the acre the 25th of April. It came up and looked very promising till it was beaten down in June by the hail-storm. Much of it never recovered, consequently did not fill as it would if it had stood up to ripen. No manure was applied except 200 lbs. of mineral fertilizer about the first of June. It was cut with a scythe the first of Aug. It was bound, set in bunches of 12 to 16 sheaves, and covered with hay caps. It stood in the field for three weeks; the rye was well cured but the straw was blackened and the grass under the bunches entirely killed. I like this way of cutting for two reasons: First, it removes all the stubble which troubles so much when cutting the first crop; Second, it adds considerably to the amount of straw.

ROOT CROPS.

The Committee on Root Crops submit the following as their report: Although several fields were entered for premium, yet for reasons unknown to us, nearly all of the same were withdrawn; probably, however, on account of the wet and warm season, causing weeds to grow so luxuriantly that more hands were required to lop their wanton growth than could be found by the owners. A field of potatoes entered by Ebenezer Bird of Leominster, although yielding a less number of lbs. per square rod than is required for a premium, yet inasmuch as he had the courage not to withdraw his field, we recommend to award a gratuity of $2.00.

MANGEL WURZELS.

A field of Mangel Wurzels was entered by Solon Carter, weighing 475 lbs. per square rod, or about 38 tons per acre. We award:

Solon Carter, Leominster, 1st premium, 2 00

In behalf of the Committee,
EPH'M GRAHAM.

Statement of Solon Carter.

MANGEL WURZELS.

I entered for the premium of the Society a patch of Mangel Wurzels. They were cultivated as follows: Manure mostly spread and plowed in, the fall before sowing. Plowed again just before sowing; harrowed and furrowed out one way 3½ feet wide, a little fine manure

strewed in the furrows, and then plowed a furrow each side of the row, turning the furrows on the manure. Smoothed the top of the ridges with a rake and sowed the seed on the ridge from middle to last of May. The plants were left from 6 to 12 inches apart. An average square rod gave 475 lbs., or a little more than thirty-eight tons per acre. This was considerably less than my last year's crop.

Cost of plowing,	$10 00
Value of manure,	120 00
Cost of seed,	4 00
Cost of cultivation,	32 00
Cost of harvesting,	40 00
	$206 00

GARDENS.

There was but one entry for the best garden, that of Hon. Alvah Crocker of Fitchburg. This was visited by the Committee on the second day of August and found to be well laid out with a good variety of vegetables, and was in good fair condition. Mr. Joseph Dyke, Mr. Crocker's gardener, has the entire charge of the various operations. Only one thing was seen that could not be commended, which was the mode of disposing of weeds.

There is probably no more profitable time to kill a weed than the period between the germination of the seed and the formation of the third leaf of the young plant. At that stage a very slight disturbance of the soil in suitable weather so disarranges the relations of the plant, that it dies with almost absolute certainty. If the cultivation is repeated in time, it is done at a minimum of labor and cost, as the ground under such circumstances, never is otherwise than open and mellow, while if weeds are allowed to grow much beyond the stage mentioned, cultivation does not destroy, but only retards the growth of the weeds in a slight degree. The difference in the growth of the crop is much more than equal to the increased expense involved by reason of more frequent cultivations. When, therefore, a pile of weeds pulled by hand, approaching in bulk the crop remaining, is to be seen, it looks as though the soil had been made to carry two crops, one of which is valueless, although it has drawn nutriment from the soil and cost money to harvest, to say nothing of the consequent injury to the crop that is valuable.

We wish that there had been more entries in this department, for the purpose of developing a healthy competition.

We award:

Alvah Crocker, Fitchburg, 2d premium, $8 00

JABEZ FISHER, *Chairman.*

APPLES, PEACHES, PLUMS AND QUINCES.

The Committee on Apples, Peaches, Plums and Quinces, report as follows:

APPLES.

12 varieties of 5 specimens each:

	Harris on Insects.
Thomas Upton, Fitchburg, 1st prem.,	
John Page, " 2d prem.,	$2 00

6 varieties of 5 specimens each.

Jabez Fisher, Fitchburg, 1st prem.,	2 00
Jacob Haskell, " 2d prem.,	1 50

3 varieties of 5 specimens each:

Willie A. Wyman, Fitchburg, 1st prem,	1 50
Thomas Upton, " 2d prem.,	1 00

Best exhibition of 12 specimens Baldwins:

E. D. Works, Fitchburg, 1st prem.,	1 00
Thomas Upton, " 2d prem.,	50

Hubbardston Nonsuch:

J. L. Perkins, Fitchburg, 1st prem.,	1 00
C. C. Boyden, Leominster, 2d prem,	50

R. I. Greenings:

Thomas Upton, Fitchburg, 1st prem.,	1 00
J. M. Sawtell, " 2d prem.,	50

Roxbury Russets:

John Page, Fitchburg, 1st prem.,	1 00
C. C. Boyden, Leominster, 2d prem.,	50

Gravensteins.

J. F. Brown, Lunenburg, 1st prem.,	1 00
Porter Piper, Leominster, 2d prem.,	50

Palmer Greenings:

Porter Piper, Leominster, 1st prem.,	1 00
J. F. Brown, Lunenburg, 2d prem.,	50

GRATUITIES.

For collections of Apples including numerous varieties:

To A. P. Whitney, Lunenburg,	
Cyrus Thurston, Fitchburg,	
Nathan Caswell, "	
Lyman Nichols, "	
J. M. Twitchell, "	
D. S. Eaton, "	
Lawrin Pratt, "	
E. B. Boyden, Leominster, each	1 00

To L. Armes and A. Crocker, Fitchburg, for one variety of Apples, each 50
To Thomas Upton, Fitchburg, for Siberian Crab Apples, 50

PEACHES.

J. M. Sawtell, Fitchburg, best collection, *Harris on Insects.*

Best Dishes or Baskets.

E. T. Miles, 1st prem., $2 00
Alvah Crocker, 2d prem., 1 00

GRATUITIES.

S. A. Childs, Benjamin Safford, S. D. Phelps, each 50

QUINCES.

Best Dishes or Baskets.

Joseph Marshall, Leominster, 1st prem., 1 00
James McIntire, Fitchburg, 2d prem., 50

CRANBERRIES.

GRATUITY.

To S. M. Caswell, Fitchburg, for basket of Cranberries, 50

D. H. MERRIAM, *Chairman.*

PEARS AND GRAPES.

The Committee on Pears and Grapes make the following awards:

PEARS.

12 varieties of 5 each:

J. M. Twitchell, Fitchburg, 1st prem., *Harris on Insects.*
Alvah Crocker, " 2d prem., $2 00

6 varieties 5 each:

J. M. Sawtell, Fitchburg, 1st prem., 2 00
George Jewett, " 2d prem., 1 50

3 varieties 5 each.

George Jewett, Fitchburg, 1st prem., 1 50
Jacob Haskell, " 2d prem., 1 00

Best exhibition 12 specimens Bartletts:

Alvah Crocker, Fitchburg, 1st prem., 1 00
Jabez Fisher, " 2d prem., 50

Seckels:

Alvah Crocker, Fitchburg, 1st prem., 1 00
Walter Heywood, " 2d prem., 50

Flemish Beauty :

J. M. Twitchell, Fitchburg, 1st prem.,	1 00
Walter Heywood, " 2d prem.,	50

Duchess :

George S. Houghton, Fitchburg, 1st prem.,	1 00
Alvah Crocker, " 2d prem.,	50

Louise Bonne de Jersey : 1 00

Walter Heywood, Fitchburg, 1st prem.,
Ephraim Graham, Lunenburg, 2d prem., 50

Lawrence :

Walter Heywood, Fitchburg, 1st prem.,	1 00
Alvah Crocker, " 2d prem.,	50

Beurre d'Anjou :

Benjamin Safford, Fitchburg, 1st prem.,	1 00
Alvah Crocker, " 2d prem.,	50

Sheldon :

Walter Heywood, Fitchburg, 1st prem.,	1 00
George Jewett, " 2d prem.,	50

GRATUITIES.

Dr. Brigham, Fitchburg, on 12 varieties,	1 00
Dr. Fisher, " "	1 00
Benjamin Safford, " Pears,	50
Joseph Marshall, N. Leominster, Pears,	1 00
Benjamin Safford, Fitchburg, Bartletts,	1 00
J. M. Twitchell, " "	1 00
George S. Houghton, " "	50
Willie A. Wyman, " Flemish Beauty,	75
J. M. Twitchell, Fitchburg, Douane Boussoch,	75

GRAPES.

Best display of Native Grapes :

No 1st premium awarded.
George Jewett, Fitchburg, 2d prem., 3 00

Best 6 clusters Israella :

George Jewett, Fitchburg, 1st prem.,	1 00
Walter Heywood, " 2d prem.,	50

Best 6 clusters Concord :

Jabez Fisher, Fitchburg, 1st prem.,	1 00
George S. Houghton, Fitchburg, 2d prem.,	50

GRATUITIES.

E. T. Miles, Fitchburg, Foreign Grapes,	2 00
J. M. Sawtell, " Concord Grapes,	75
Thos. Palmer, " "	50

L. B. CASWELL, *for the Committee.*

ASSORTED FRUITS AND FLOWERS.

The Committee on Assorted Fruits and Flowers make the following awards:

PLANTS IN POTS.

J. M. Sawtell, Fitchburg, 1st premium,	$2 00
Sylvanus Sawyer, Fitchburg, 2d prem.,	1 00

NAMED PLANTS IN POTS.

J. M. Sawtell, Fitch. 1st prem., for best 3 named Plants in Pots,	2 00
Mrs. J. H. Lockey, 2d " " " " "	1 00

CUT FLOWERS.

J. M. Sawtell, Fitchburg, 1st prem.,	2 00
Mrs. G. S. Houghton, Fitchburg, 2d prem.,	1 00
" " " 1st prem. best 5 named Asters,	2 00
J. M. Sawtell, " 2d " " " "	1 00
" " " 1st prem. best 5 named Dahlias,	2 00
Joseph Jackson, " 2d " " " "	1 00
J. M. Sawtell, " 1st prem. best 5 named Verbenas,	2 00
H. E. Boyden, Leominster, 2d " " " "	1 00
J. M. Sawtell, Fitchburg, 1st prem. for Parlor Boquets,	2 00
Mrs. G. S. Houghton, Fitch. 2d " " " "	1 00
Mrs. J. Jackson, Fitchburg, 1st prem. for Hand Boquets,	2 00
J. M. Sawtell, " 2d " " " "	1 00

GRATUITIES.

Mrs. Geo. Houghton, for Coxcombs and Zinnias,	2 00
Mr. S. Sawyer, Canna and Camelias,	2 00
W. J. Clifford, for Boquet,	1 00
Benj. Safford, for Wild Flowers,	1 00
Mrs. Wm. Walker, for Pansies,	1 00
Mrs. Nancy Snow, Leominster, for Boquet,	50
Mrs. Joseph Heywood, Sterling, for Boquet,	50

Several of the above premiums might have been awarded to Sylvanus Sawyer, had his gardener properly entered them in time, Mr. S. being out of town.

F. E. CLEAVES, *for the Committee.*

VEGETABLES.

The Committee on Garden Vegetables have attended to their duty, and would respectfully submit the following report :

FOR BEST COLLECTION.

J. M. Sawtell, Fitchburg, 1st prem ,	$7 00
E. F. Wilder, Ashby, 2d prem.,	5 00

GRATUITY.

Luther G. Morey, Fitchburg,	2 50

HUBBARD SQUASHES.

George S. Houghton, Fitchburg, 1st prem.,	1 00
Stillman Stone, Lunenburg, 2d prem.,	50

MARROW SQUASHES.

Jefferson Kimball, Fitchburg, 1st prem.,	1 00
Horace Wood, " 2d prem.,	50

TURNIP BEETS.

Thomas Upton, Fitchburg, 1st prem.,	75
George Billings, Lunenburg, 2d prem.,	50

ENGLISH TURNIPS.

Benjamin Safford, Fitchburg, 1st prem.,	50

PUMPKINS.

Levi Kendall, Sterling, 1st prem.,	75
Silas Pratt, Fitchburg, 2d prem.,	50

TOMATOES.

Dr. H. H. Brigham, Fitchburg, 1st prem.,	50
J. P. Putnam, " 2d prem.	25

GRATUITIES.

Dr. H. H. Brigham, Peppers,	25
J. P. Putnam, Seed Corn,	75
Silas Pratt, Potatoes,	50
Thomas Upton, Onions,	75
D. S. Eaton, Ruta Bagas,	25
Chas. F. Mitchell, Fitzwilliam, N. H., Mammoth Squashes,	2 00
Franklin Nourse, Sterling, Seed Corn,	75
George S. Houghton, Celery,	75
J. P. Putnam, Seedling Potatoes,	50
Levi Kendall, Pop Corn,	25

WM. WOODBURY, *for the Committee.*

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES, &c.

The Committee on Bread, Butter, Cheese, Pickles, &c., make the following awards:

WHITE BREAD.

Miss Alice Wilker, 1st prem.,	$2 00
Miss Mary Atherton, 2d prem.,	1 00
Miss Mary A. Sullivan, 3d prem.,	50

BROWN BREAD.

Mrs. Thomas Young, 1st prem.,	2 00
Miss Alice Wilker, Ashburnham, 2d prem.,	1 00
Miss Melinda Willard, 3d prem.,	50

LUMP BUTTER.

Mrs. Whittemore, 1st prem.,	4 00
Wilkes Roper, Princeton, 2d prem.,	3 00
Mrs. Joseph Heywood, 3d prem.,	2 00

PICKLES.

Miss C. S. Tileston, 1st prem.,	75
Mrs. Wm. Woodbury, 2d prem.,	50
Mrs. A. P. Whitney, 3d prem.,	25

CANNED FRUITS.

Mrs. E. Stone, Gratuity,	2 00
Mrs. E. B. Dole, "	2 00
Mrs. Jonas Corey, "	2 00

JELLIES.

Miss Mary Marsh, Gratuity,	2 00
Miss Ella Jaquith, "	2 00

Several loaves of bread were offered quite warm, and evidently not within the rule, and were not considered by the Committee.

Respectfully submitted,

A. NORCROSS, *Chairman.*

MECHANICS AND MANUFACTURES.

The Committee on Mechanics and Manufactures award the following Premiums:

L. J. Brown, for Weed Sewing Machine, 1st prem.,	$5 00

Mrs. M. S. West, Wilson	" 2d prem.,	4 00
L. H. Lavelly, Howe	" 3d prem.,	3 00
P. P. Stark, for Brackets,		2 00
A. D. Waymoth & Co., Wood Turning Lathes,		3 00
Clark & Chapman, for Saw Sharpener,		3 00
A. H. Simonds, for Printing Press,		2 00
J. C. Walker, for Excelsior Clothes Drier,		3 00
Rollstone Machine Co., for Planing Machine,		20 00
" Band Sawing Machine,		
" Jig Saw,		
" Stretcher Machine,		
" Saw Bench,		
" Buzz Planer,		
" Self-oiling Pulley,		
Henry J. Kimball, for Knowles' Steam Pump,		8 00
" Springfield Gas Machine,		
" Gas Fixtures,		
" Steam and Gas Pipes,		
M. J. Morse, best Parlor Set of Furniture, 1st prem ,		6 00
" best Chamber " 1st prem.,		5 00
C. M. Flint, Saw Mill and Dog,		5 00
W. H. Allen, Harnesses, 1st prem.,		4 00
S. G. Frost, " 2d prem.,		2 00
J. C. Gill, samples of Horse Boots,		2 00
D. A. Corey, Crockery, Plated Ware, Paper Hangings, Carpets and Dry Goods,		6 00
Woodrough & Co., Boston, for Assortment of Saws,		4 00
A. A. Spear, Parlor and Cook Stoves,		3 00
F. W. Ward & Co., Winchendon, 2 cases of Printing,		2 00
W. K. Jewett & Co., Pianos, 1st prem.,		6 00
J. F. Chaffin, (Arlington Piano Co.) Pianos, 2d prem.,		5 00
S. G. Frost, Trotting Sulky,		1 00
Lawton & Goodnow, exhibition of Furniture, 1st prem.,		8 00
L. D. Wheeler, Champion Washing Machine, 1st prem.,		3 00
Waldo Whitney, Victor Water Wheel,		8 00
C. D. Reed, Ayer, Apple Corer and Slicer,		50
E. M. Dickinson, Manufacturer of Shoes,		3 00
George B. Knowlton, Hardware,		5 00
" Stoves,		3 00
" Clothes Wringer,		1 00
W. A. Macurda & Co., Perfumery,		5 00
George W. Lombard, Ring Sawing Machine,		8 00
N. E. Machine Co., Engine Lathe and Model of Wood Planer,		3 00
" 1 Aquarium,		2 00
" Box of Dividers, &c.		1 00
W. E. Henry, Cook and Parlor Stoves,		4 00
C. B. Sawyer, Machine Movement,		3 00
Haskins Machine Co., 1 Steam Engine,		10 00

Haskins Machine Co., 1 Ellis Vapor Engine,	10 00
Isaac Jones, Carriages,	5 00
F. A. Whitney Carriage Co., Children's Carriages,	5 00
George Robbins, Stoves,	4 00
M. B. White, Gambull's Washing Machine. 2d prem.,	2 00
Wm. M. Leathe, improved Washing Machine, 3d prem.,	1 00
E. G. Davis, Jig Sawing,	1 00
H. N. Rugg, Manufacturer of Confectionery,	2 00
Upton & Shaw, Fertilizers,	1 00
Mrs. M. S. West, Hoop Skirts,	50
Woodrough & Co., Boston, Star Frame,	1 00

CHARLES FESSENDEN, *for the Committee.*

AGRICULTURAL IMPLEMENTS.

Your Committee have attended to their duty, and respectfully submit the following report :

COLLECTION OF AGRICULTURAL IMPLEMENTS.

Buckeye Mowing Machine Co., 1 horse Mower, prem.,	$3 00
John P. Hunter, Worcester, 1 horse Sprague Mower,	5 00
Clipper Mowing Machine Co., on 2 horse Mower,	5 00
Buckeye " Cider Mill,	3 00
N. B. Reed, Princeton, Ox Cart, prem.,	5 00

JONATHAN WHITMAN, *Chairman.*

FINE ARTS.

The Committee on Fine Arts make the following awards :

OIL PAINTINGS.

Miss Louise Haskell, Fitchburg, 1st prem.,	$4 00
Miss S. L. Munroe, Leominster, 2d prem.,	2 00
Miss Fanny Cleaves, Fitchburg, gratuity,	2 00

CRAYON DRAWINGS.

Edwin Cleaves, Fitchburg, 1st prem.,	3 00
Mrs. C. L. Fairbanks, Fitchburg, 2d prem.,	2 00

PENCIL DRAWINGS.

George Wilson, Fitchburg, 1st prem.,	2 00
Miss Ella S. Wright, Fitchburg, 2d prem.,	1 00
Miss Jennie Goodrich, " gratuity,	75
Miss Emma Palmer, " "	75
Mrs. C. L. Fairbanks, Fitchburg, Colored Pencilling,	75
Miss May Caldwell, Fitchburg, Water Color Painting, &c ,	2 00
Mrs. S. E. Field, Fitchburg, 2 Chromotypes,	2 00
Mrs. J. M. Carpenter, Fitchburg, 1 Worsted Wreath,	1 00
Mrs. P. J. Fales, Fitchburg, Seed Wreath and Frame,	1 25
Mrs. M. M. Downer, Shell Monument and Frame,	75
Miss Jennie Upham, Fitchburg, Wax Flowers,	50
George E. Ferson, Fitchburg, (9 years of age,) 2 Pencil Drawings,	50
Miss Carrie S. Lowe, 1 Pencil Drawing,	30

J. HASKELL, *Chairman.*

FANCY ARTICLES.

The Committee on Fancy Articles make the following report:

Daniel Pratt, Tidies,	2 00
Israel Whitney, 2 Quilts and Cushion,	75
Nelly Weston, 1 Affghan,	50
Mrs. J. V. Hall, 1 Quilt,	25
Mrs. Nancy Snow, 1 Quilt,	50
A. B. Whitney, Rugs,	1 00
Alice King, Tidy,	15
Miss Hattie Manning, Tidies.	50
C. H. Smith, Tidies and Table Cover,	1 00
Mrs. J. Paige, Tidies,	30
Miss L. Maria Winchester, Worsted Work,	50
Miss C. Marshall, 2 Tidies,	30
Josie Smith, Sack.	25
Mrs. Houghton, Collar,	25
Miss Carrie Howarth, 2 Tidies,	30
Marietta Harrington, Assorted Articles,	50
Jennie Goodrich, 2 Mats,	25
Miss J. Joel, Mat and Cushion,	50
Mary A. Boyden, Toilet Set,	75
Henry A. Hall, Birds (stuffed),	75
Mrs Young, Mat,	15
Willie A. Lowe, Old Almanac and Grasshopper,	25

Miss Jennie Upham, Wax Flowers and Tidy,	50
Frank Works, Eggs,	25
Mrs. H. H. Dickson, Tidies, &c.,	75
Mary L. Dennis, Toilet Set, Tidies and Worked Yoke,	1 50
Miss Jennie McCarthy, Worsted Work,	75
Amanda Fox, Lamp Mat,	25
E. Marble, Insects,	50
Mrs. Cozzens, 2 Tidies,	30
Mrs. Kilburn, 1 Tidy,	30
Emma F. Kimball, 1 Tidy,	15
Mrs. N. Snow, 4 Cushions,	1 00
Mrs. J. M. Carpenter, 1 Night Dress,	50
Miss M. S. Allen, Ottoman Cover,	50
O. Stockwell, 1 Case Butterflies,	50
Miss Mary Cushing, 1 Rag Rug,	25
Mrs. M. A. Beckwith, Bead Work,	25
Katy A. Trimnell, 1 Rug,	75
Mrs. W. M. Kershaw, 1 Rug,	50
Miss A. J. Hubbard, 1 Rug,	50
Mrs. Pierce, Worsted Wreath,	1 00
Lizzie Priest, Boquet of Worsted Work,	75
Addie F. Lowe, Dried Autumn Leaves,	25
Fred A. Goodrich, Collection of Bird's Eggs,	50
Miss J. Murnane, 1 Bead Cushion,	50
Lottie E. Caswell, 1 Lamp Mat,	50

F. MAGWIRE, *Chairman.*

TROUT.

The offer of premiums for the best living trout not less than six in number, was a happy thought. The result did very much to interest the visitors to the Hall, as proved by the continuous crowd of persons of all ages which swarmed around the tanks containing the beautiful specimens. There were three entries, but only one, that of Hon. Ohio Whitney of Ashburnham, contained the requisite number of fish *artificially* raised. Trout of one to four years old, "perfect beauties," as every one said, looking "good enough to eat," disported themselves in a way that made it hard to keep hands off.

The artificial propagation of fish is an interest that is constantly increasing in magnitude, although the growth of only some half dozen years. There are a number of breeders of trout in our vicinity who are attaining an apparent success that affords much gratification. We hope to see them all represented in our future exhibitions, and also in competition for the premiums for the best experiment in raising trout.

We award as follows :

Ohio Whitney, Ashburnham, 1st prem.,	$5 00
Jewett & Colony, Fitchburg, grat.,	1 50
Waymoth & Monroe, Fitchburg, grat.,	1 50

JABEZ FISHER, *Chairman.*

ESSAYS.

The Committee on "Essays," report that three papers were submitted to their consideration, but none appeared of sufficient merit to deserve the first premium.

The second premium of fifteen dollars the committee award to the Essay, "Our Forests."

STEPHEN SHEPLEY, *Chairman.*

ANALYSIS OF PREMIUMS AND GRATUITIES AWARDED.

Amount awarded for Town Teams,	$30 00
" " " Neat Stock,	272 00
" " " Horses,	134 00
" " " Swine,	40 00
" " " Sheep,	1 00
" " " Poultry,	35 00
" " " Fruits,	80 25
" " " Flowers,	30 00
" " " Vegetables,	72 00
" " " Bread,	7 00
" " " Butter,	9 00
" " " Agricultural Implements,	21 00
" " " Manufactures,	240 00
" " " Other Objects,	150 87
	$1,122 12

The Premiums and Gratuities paid to two hundred and one persons, were distributed as follows :

Fitchburg,	$570 11	Ashburnham,	1 75
Leominster,	211 42	Winchendon,	1 00
Lunenburg,	86 07	Sterling,	2 25
Princeton,	22 00	Ayer,	50
Harvard,	10 00	Fitzwilliam, N. H.,	1 00
Templeton,	10 00		

TREASURER'S REPORT.

Worcester North Agricultural Society,

In account with Geo. S. Houghton, Treasurer.

1872.			Cr.
Jan. 1,	By Cash on hand,		$1,030 43
Feb. 24	"	From New Loan,	3,000 00
Aug. 7,	"	Borrowed on Note of Treasurer,	150 00
Sept. 25,	"	For Admission to Fair,	1,610 74
"	"	Entrance Fees,	24 00
"	"	Rent of Grounds,	106 00
"	"	Tickets to Annual Dinner,	161 00
"	"	Of H. A. Goodrich for marking boards,	14 00
Oct. 10,	"	From State Treasurer,	600 00
Nov. 30,	"	" New Members,	70 00
			$6,766 17

1872.			Dr.
Jan.	To Cash paid	Salary Henry Allison, Treas. 1871,	$50 00
"	"	For Advertising, 1871,	92 50
"	"	" Labor, Fair 1871,	128 73
"	"	C. H. Benton, Labor, 1870,	8 50
"	"	Lumber and Carpenter Work for Seats and Temporary Building,	376 81
"	"	Printing, 1869 and 1870,	387 99
"	"	Shafting, Labor and Freight for Mechanical Department,	338 62
"	"	Police Service, 1871,	8 50
"	"	Annual Dinner, 1871,	181 00
"	"	Fitchburg and Leominster Bands,	86 67
"	"	Geo. Robbins & Co. Smoke Stack, Repairs of Pumps, &c.,	83 93
"	"	T. B. Works, Hay for 1870 and '71,	96 59
"	"	W. E. Clapp, Teaming Cinders, &c.,	52 50
"	"	E. Atkinson, painting house, 1869,	16 18
"	"	B. W. Eddy, ex-Treasurer, Cash overpaid 1869,	47 72
"	"	G. S. Houghton, Salary as Sec'y,	100 00
"	"	" " Postage, Telegraphing, Stationery, &c.,	61 91
"	"	Fitch Gas Co., Filling Balloon,	64 00
"	"	Premiums and Gratuities, 1870,	14 00

Jan.	To Cash paid	Int. on Miles, Fisher & Cushing's Note, 1869, 1870, 1871,	1,564 32
"	" " "	Shepley & Co. Stationery, 1869, '70,	20 89
"	" " "	Grain and Horse Hire,	16 50
Aug. 7,	" " "	For Six Months Interest on Note for $3000,	105 00
Oct. 7,	" " "	I. P. Jaquith, Tending Gate 2 days,	4 00
" 8,	" " "	W. E. Clapp, Teaming,	16 05
" "	" " "	J. C. & H. L. Piper, Printing,	19 75
" "	" " "	Geo. Burford, Jr., Selling Tickets 2 days,	6 00
" "	" " "	Henry Knight, 10 days Labor,	30 00
" "	" " "	L. Oakman, Setting Glass,	1.50
" "	" " "	D. W. Rugg, Labor and Watching,	8 50
" "	" " "	H. J. Colburn, Supt. Mechanical Department, and Postage,	23 00
" "	" " "	L. Barker, Lumber and Labor,	127 39
" "	" " "	Money borrowed on Treasurer's Note,	151 75
" "	" " "	I. P. Connig, Gate Keeper 2 days and evening,	9 00
" 25,	" " "	S. W. Harris, Police Service,	6 00
" "	" " "	N. I. Cochran, Carpenter Work,	22 50
" "	" " "	Roll. Machine Works, Shafting, &c.,	153 71
" "	" " "	Wm. R. Elford, Labor and damage to clothing,	24 00
" "	" " "	Fitchburg Railroad, Freight,	11 59
" "	" " "	Wm. A. Carleton, Sell'g Tickets 1 day,	3 00
" "	" " "	H. E. Caswell, Care of Tent, &c.,	10 00
" "	" " "	John M. Lockey, Asst. Secretary,	5 00
" "	" " "	A. P. Goodridge, Hay,	48 00
" "	" " "	J. H. Lockey, Leominster Band,	115 00
" "	" " "	Garfield & Proctor, Coal,	11 72
" "	" " "	Dow & Starbuck, Tin Work,	14 98
" "	" " "	Haskins Machine Co., Grate Bars,	9 23
" "	" " "	C. E. Sawtelle, Labor,	15 00
" "	" " "	T. Alexander, Carpenter Work,	8 75
" "	" " "	L. J. Brown, Table Cloths,	33 12
" "	" " "	S. S. Dow, Filling Tank, &c.,	20 50
" "	" " "	M. F. Plimpton, Asst. Secretary,	7 00
" "	" " "	Insurance, Fitch. Mutual Ins. Co.,	10 80
" "	" " "	Premiums, Annual Exhibition, 1872,	913 62
" "	" " "	S. A. King, Balloon Ascension,	300 00
Nov. 30,	" " "	M. Gleason, Annual Dinner,	301 45
" "	" " "	Geo. S. Houghton, Salary, Secretary and Treasurer,	150 00
" "	" " "	Postage,	20 13
" "	Cash on hand,		249 02
			$6,766 17

SECRETARY'S REPORT.

The Twentieth Annual Exhibition of the Society was held at their grounds on Tuesday and Wednesday, Sept. 24th and 25th. We were more highly favored in respect to weather than many others, the present season, for both days were mild and pleasant. The attendance on the first day was not very large, but on the second was fully equal to, or greater than that at any other show of the Society. A different result was feared by some, and boldly predicted by others, on account of a somewhat radical change in the programme, viz., the leaving out of all professional trotting for large purses, and the substitution therefor of a mechanical department in which was shown a large number of the machines and other products of the manufacturing establishments of Worcester North. The change was certainly without any bad effect on the attendance, and yet, many of those who most desired it, did not know it was to be made, and therefore did not exert themselves so much to secure the success of the Fair as they would if they had known of the difference between this and many preceding Fairs. It cannot be denied that the "Agricultural Horse Trot" is losing favor among most of the Agricultural Societies of New England, at least, and that in future it will receive a less share of attention, in proportion to the more legitimate branches of the show.

It is not likely that any less encouragement will be given to the raising and exhibition of *really fine* horses, for the demand, and prices paid for such, are constantly increasing; but docility, beauty, fine carriage and endurance will be sought for rather than the mere ability to trot a mile in a few seconds less than the average of *good* horses. Many, if not most of the *fast* horses are *utterly worthless* except for exhibition in a race, and to draw around them the gambling and other crimes and disorders which inevitably follow in their wake, but the 30 Gents' Driving and Family Horses shown at our last Fair were every one of them fit for solid use as well as pleasant to look upon.

The very general expression of favor with which the change was received was exceedingly gratifying to those who had aided in bringing it about.

The show of Thorough-bred Stock was better than ever before in quality, though hardly up to those of one or two previous years in point of numbers. As usual, Capt. E. T. Miles led in the exhibition of Ayrshires, Mr. Augustus Whitman in Short Horns, and Mr. J. F. Brown in Jerseys, but there were many fine animals shown by other parties.

Of grade and native stock there was less than usual, and but *two* sheep, while of swine and poultry the display was excellent, and very large. The following account of the mechanical exhibition we copy from the *Fitchburg Sentinel:*

MECHANICAL DEPARTMENT.

We were agreeably disappointed at the opening of the Fair on Tuesday morning, at the display of machinery and other articles on the lower floor of the building, as upon the previous afternoon the appearance was that the room would have a decidedly empty look; but at last the exhibitors came in nobly, and the building had as busy a look as usual, though we think that Fitchburg, as an eminently *mechanical* city *should* have had a *better* machinery display. Commencing at the further end of the building, under the shed, we found one of C. M. Flint's excellent Circular Saw Mills. This mill is self-setting and shifting. The log being put on and fastened down and the saw started, the operator has no further care till the log is sawed into boards or planks, as the case may be, the mill reversing its motion at each end and feeding itself for a new cut, automatically, going a *slow* forward motion while sawing, and a very quick back motion of carriage, thus saving much time. Next to the saw-mill was one of "Tefts Patent Saw Sharpeners and Gummers," manufactured by Clark & Chatman Machine Co., at Turner's Falls, Mass.; a solid Emery Wheel, revolving very rapidly, taking the metal out of large circular saws with surprising rapidity, and throwing out a stream of sparks sufficient in number, apparently, to satisfy *all* the crowd of ladies attending the Fair. There were the Boilers, supplied by D. M. Dillon & Co., which furnished the steam to run the engines and pump; these were fed with water by a "Knowles" Steam Pump, put in place by Mr. H. J. Kimball, which also forced water to the various fish tanks inside the building, etc., working finely both days. Mr. Kimball also furnished all the Piping used, and lighted the building very beautifully, Tuesday evening, with a Self Generating Gas Apparatus. Just within the main building were two of the Haskins Vertical Engines, which furnished the motive power for the various machines in operation. These are very beautiful engines, with balanced valves, of the best workmanship, and, we understand, very cheap in proportion to the power obtained. The intention was to run one of the engines with the vapor of the bi-sulphide of carbon, boiled by the exhaust from the other, on the "Ellis" system, but the manufacturer failed to get the bi-sulphide here in season, so both were running with steam. Next to the engine were the various machines of the Rollstone Machine Co., who took the First Premium for Machines. They exhibited one of their Double Circular Saws, so arranged that either a fine cross-cut saw, or a rip saw, can be used, a Band Saw, a Jig Saw, one large Plane about the usual style, and a small "Buzz" Planer for small surfacing work, and finally, a "Stretcher" for turning chair rounds, &c., altogether making a very nice display, with the shavings flying, sawing out small chairs, etc., etc. The New England Machine Co. had an Engine Lathe for iron work, and a very small Wood Planer for exhibition, the latter smoothing off small pieces of board from two to five inches in width. This Company intended putting in one of their Portable Engines, but could not obtain their boiler in season. Mr. A. D. Waymoth put in

two of his Wood Working Lathes, which turn out various little knick-knacks of different patterns, with marvelous celerity and ease. One of the most novel machines and one that attracted a great deal of attention, was "Lombard's Ring Saw Machine," made by Goodspeed & Wyman, of Winchendon. Mr. Lombard himself was present and explained to all who asked, the operation of the saw. It has no centre or arbor, running upon friction blocks of rawhide and receiving motion from the friction of a swiftly-revolving leather covered wheel. It is getting to be extensively used in chair shops, and wherever used is very much liked. Another novelty was a little machine exhibited by Mr. C. B. Sawyer of Fitchburg, which, by a peculiar combination of gears, a chain, &c , raised a weight twice as high as could be done in any other way by the same power. A very pretty and pleasing picture was made in the artistic arrangement by Mr. Woodrough, of the various styles of Saws he exhibited, the bright steel showing off to advantage upon his dark cloth background. Up at the right, near the main entrance, was a large array of Stoves from W. E. Henry, G. B. Knowlton, Geo. Robbins, and A. A. Spear. Each had a good show and all the Stoves shone well and were duly admired and talked over by the ladies more especially. Mr. W. E. Henry showed the "Hot Blast Cooking Stove," which was a little ahead of anything we have seen in that line, combining all the modern conveniences with *several new ones*, making it apparently easier to cook than not, besides saving fuel. Besides his Stoves, Mr. Knowlton made, as usual, a fine display of Hardware in a case and upon the wall, showing all kinds of Carpenters's Tools as well as many other small things. Mr. S G. Frost exhibited a number of first-class Harnesses, some Blankets, &c., making quite a show. Mr. W. H. Allen also had some Harnesses, an extensive array of Valises, &c , &c. There were several light, comfortable looking Carriages and Buggies, made by Isaac Jones of West Amesbury, causing people to long for a horse to be attached and an opportunity to take a ride, and also taking the first premium. The Furniture displayed by Messrs. Lawton & Goodnow, and Mr. M. J. Morse, was decidedly handsome, black walnut, mahogany, marble tops, &c., &c. Mr. Morse came near being drowned out by the overflowing of one of the fish tanks above, but fortunately his goods received but little damage. He received the premium as having the best assortment, but Lawton & Goodnow deserve recognition for their own manufacturing and upholstering of the Furniture exhibited by them. The "F. A. Whitney Carriage Co," had quite a variety of Baby Carriages, Toy Carts, &c., on exhibition. The Candy, Fruit and Cake stand seemed to have at least its fair share of attention as also the table of shells. The Trout were finally brought down stairs, and were at all times surrounded by an admiring crowd. Several of the trout were of enormous size. We were glad to see so many out of town exhibitors, and hope there will be an increased number each year. We also hope that our own townspeople will take hold much more earnestly another year.

The show in the Upper Hall was very fine, and by its effective arrangement did great credit to the taste and skill of Mr. Edwin P. Monroe, the Superintendent of this Department. The display of fruit was unusually large and of very fine quality, and of canned fruits and preserves there were more shown than ever before.

Dinner was served in very creditable style at 12 o'clock, in the Fusiliers' tent, by Mr. Gleason, steward of the Rollstone House. The President, Hon. John H. Lockey, presided, and Rev. Dr. Grant invoked the Divine blessing, after which full justice was done to the eatables prepared. The annual Address was then delivered by Rev. C. W. Emerson of Fitchburg. This was given almost wholly extempore, and the brief report which we publish does not do the speaker full justice. After the address, Major J. Ladd of Lowell, delegate from the Mass. State Board of Agriculture, made a very pleasant speech. Excellent music was furnished on both days by the Leominster Band.

The Plowing Match and trials of Working Oxen and Draft Horses in the forenoon, and the Foot Race, Trial of Steam Fire Engines, &c., in the afternoon were the chief out-door exercises of the day.

Wednesday was "horse day," though not so exclusively so as in some past years, as a large part of the other stock was still present, and a large share of attention was also given to the mechanical exhibition, the balloon ascension, foot and sack races, &c. The show of Family and Gents' Driving Horses has probably never been excelled in this community, and the exhibition of them upon the track was very satisfactory to the thousands present.

The balloon ascension was made at a quarter to four, by Walter S. King, a son of the veteran Prof. S. A. King, the Prof. being obliged to leave before the time appointed, to meet a previous engagement at Plymouth, N. H. Young King came near being thrown out soon after starting, by contact with the top of a pine tree, but afterward had a pleasant voyage to where he landed in the town of Brookline, N. H.

Great credit is due to the Chief Marshal, Gen. John W. Kimball, and his aids, for their efficient services, and also to H. J. Colburn, Supt. of Mechanical Department, E. P. Monroe, Supt. of Upper Hall, A. P. Goodrich, Supt. of Cattle, and Wm. Wooobury, Supt. of Horses, for their faithful and successful efforts to add to the interest of the exhibition.

The Secretary *cannot commend the neglect of nearly one-fourth* of the persons appointed upon committees, who neither presented themselves to discharge their duties, nor gave him seasonable notice of their inability to do so. Such neglect is embarrassing to him, but even more annoying to many others, on the day of the Fair, and he hopes that another year will bring a great improvement in this respect. The reports made by committees, and statements by competitors, are shorter and less interesting than almost ever before, and this too we hope to see greatly improved upon another year. The premiums offered for extended reports are certainly liberal, and if not large enough they should be

increased, for much of the benefit to be derived from our Fairs will come from careful and intelligent criticism on the articles, animals, or experiments offered for premium.

GEO. S. HOUGHTON, *Secretary.*

PRESIDENTS, ORATORS AND SECRETARIES

OF THE

Worcester North Agricultural Society.

PRESIDENTS :

1850-1.—ABEL F. ADAMS, Esq. Fitchburg.
1852-3.—Hon. IVERS PHILLIPS, Fitchburg.
1854-5.—Hon. MOSES WOOD, Fitchburg.
1856-7.—THOMAS R. BOUTELLE, M. D., Fitchburg.
1858-9.—Hon. JABEZ FISHER, Fitchburg.
1860-1.—THOMAS BILLINGS, Esq., Lunenburg.
1862-3.—LEWIS H. BRADFORD, Esq., Fitchburg.
1864-5.—Hon. OHIO WHITNEY, Jr., Ashburnham.
1866. —JOSEPH UPTON, Esq., Fitchburg.
1867. —JOSHUA T. EVERETT, Esq.. Princeton.
1868. —EUGENE T. MILES, Esq., Fitchburg.
1869. —SAMUEL OSGOOD, Esq., Sterling.
1870. —WILLIAM WOODBURY, Fitchburg.
1871-2.—Hon. JOHN H. LOCKEY, Leominster.
1873. —STEPHEN SHEPLEY, Fitchburg.

ORATORS :

1850.—Hon. CHARLES HUDSON, Lexington.
1852.—THOMAS E. PAYSON, Esq., Rowley.
1853.—Rev. HORATIO STEBBINS, Fitchburg.
1854.—Gov. EMORY WASHBURN, Worcester.
1855.—Hon. NATHANIEL P. BANKS, Waltham.
1856.—CHARLES L. FLINT, Esq., Boston.
1857.—JUSTUS TOWER, Esq., Lanesborough.
1859.—Hon. GEORGE S. BOUTWELL, Groton.
1860.—Hon. GEORGE B. LORING, Salem.
1861.—Hon. A. H. BULLOCK, Worcester.
1862.—Rev. A. N. ARNOLD, D. D., Westboro'.
1863.—LUTHER H. TUCKER, Esq., Albany, N. Y.
1867.—GEORGE E. TOWNE, Esq., Fitchburg.
1868.—Hon. DANIEL NEEDHAM, Groton.
1869.—Hon. WILLIAM SPRAGUE, Rhode Island.
1870.—Hon. ALVAH CROCKER, Fitchburg.
1871.—Dr. JAMES R. NICHOLS, Boston.
1872.—Rev. C. W. EMERSON, Fitchburg.

SECRETARIES :

1850-1.—NATHAN UPHAM, Fitchburg.
1852. —JOSEPH PIERCE, Fitchburg.
1853. —CHARLES W. WILDER, Fitchburg.
1854-5.—THOMAS R. BOUTELLE, Fitchburg.
1856-7.—JABEZ FISHER, Fitchburg.
1858-63.—WILLIAM G. WYMAN, Fitchburg.
1864. —LEWIS H. BRADFORD, Fitchburg.
1865-6.—ALVIN M. SAWYER, Fitchburg.
1867-9.—LEWIS H. BRADFORD, Fitchburg.
1870. —WALTER A. EAMES, Fitchburg.
1871-3.—GEORGE S. HOUGHTON, Fitchburg.

COMMITTEES AND PREMIUMS

FOR THE

TWENTY-FIRST ANNUAL EXHIBITION,

TO BE HELD AT FITCHBURG,

Tuesday and Wednesday, September 23d and 24th, 1873.

No person will be allowed to become a competitor for any of the Premiums herein offered, unless he shall have made an entry for the same, with the Secretary, within the time prescribed for each class, nor unless he shall have furnished all required statements relating thereto, within the specified time.

For the convenience of those who live at a distance, entries may be made by mail; and all entries so made must be delivered at some post-office one day previous to the expiration of the time specified, and must bear proof of having been so delivered, either by postmark, or a certificate of registry from the postmaster.

☞Communications for the Secretary should be sent to Fitchburg.

STOCK.

All entries for premiums under this head must be made on or before the Friday previous to the Show, except Horses and Poultry, which may be as late as the Monday previous, and all stock must be owned by the person who enters it.

All persons who are required to furnish a statement, must do so to the Secretary at the time of making the entry, and he shall post copies on the days of exhibition.

All live stock must have been raised by the person entering the same, or owned by him at least three months next previously, except in the case of mis-mating oxen and horses, rendered necessary by injury or disease.

Each entry of stock for the pens must specify the breed of the animal, if known, and the age.

Fat cattle, working cattle, and draught horses must be weighed on the scales on the grounds of the Society, and a certificate furnished the Secretary.

The weight of all other stock will not be required.

All stock except oxen shown only in Town Teams, taken from the grounds before 3 o'clock P. M. on Wednesday, without permission of the President, shall forfeit all premiums that may have been awarded to it.

The committees on Neat Stock, Sheep, Swine and Poultry, and on the Trials of Working Oxen, and the Plowing Match, shall make their awards previous to 3 o'clock P. M. on Tuesday. They shall designate the premiums immediately with printed ribbons or cards, blue for first, red for second and white for third, and shall make their reports to the Secretary previous to 12 o'clock M. on Wednesday.

The Society will provide good hay for all Stock entered for premium or exhibition during the time of the Show, and will furnish grain at cost, to all who may require it.

Hereafter, the best animals exhibited shall be entitled to the premiums, without regard to former awards.

Committee in charge of Grounds.—J. M. Sawtell, Joseph Cushing, Fitchburg.

Committee on Pedigrees.—E. T. Miles, Joel Page, Fitchburg; Augustus Whitman, Leominster.

Committee on Animals for Exhibition.—Ephraim Graham of Lunenburg.

Committee on Forage.—A. P. Goodridge, Fitchburg.

Committee on Finance.—Stephen Shepley, Fitchburg.

THOROUGH BRED STOCK.

Committee.—D. S. Pratt, Brattleboro'; Andrew Robbins, Groton; O. B. Hadwen, Worcester; Edwin D. Works, Fitchburg; Josiah Page, Westminster; Merrick Wallace, Ashburnham; Joseph Whitney, Sterling.

SHORTHORNS, AYRSHIRES, JERSEYS, DEVONS, OR OTHER THOROUGH-BRED STOCK.

Herds consisting of One Bull and not less than Four Females, all one year old and upwards, and owned by the competitor for four months preceding the show. Two premiums—$12, 8.

BULLS.

Two years old and upwards. Two premiums—$8, 5.
One year old and under two. Two premiums—$6, 4.
Calves (under one year). Two premiums—$5, 3.

COWS.

Four years old and upwards. Two premiums—$6, 4.
Three years old and under four. Two premiums—$5, 3.
Two years old and under three. Two premiums—$4, 2.
One year old and under two. Two premiums—$3, 2.
Calves (under one year). Two premiums—$3, 2.

Competitors for premiums on milch cows, whether for herds or single animals, and milk heifers, will be required to certify in writing, at the time of entry, to the weight of the milk, or the weight of the butter, as the case may be, during each of the six days commencing with the first Monday in June, and the corresponding six days in September, and to the manner of keeping and general management. Cows that calve near or after the first Monday in June, may be tried at another time.

Competitors will be required to state the time of last calving of their cows.

STOCK NOT THOROUGH-BRED.

Thorough-bred Stock may compete in the following classes, but shall have no advantage on account of blood or pedigree.

MILCH KINE.

Committee.—Samuel Osgood, Sterling; Edmund Houghton, Lunenburg; John Cutter, Winchendon; Chas. K. Sawyer, Fitchburg; Timothy Lincoln, Leominster.

Herds of four cows or heifers, each. Two premiums—$10, 7.

The committee will regard age, expense of keeping, &c.

Cows for butter. Two premiums—$5, 4.
Heifers, three years old, for butter. Two premiums—$5, 4.
Heifers, two years old, for butter. Two premiums—$4, 3.
Cows, for milk. Two premiums—$5, 4.
Heifers, three years old, for milk. Two premiums—$5, 4.
Heifers, two years old, for milk. Two premiums—$4, 3.

Competitors for premiums on milch cows, whether for herds or single animals, and milch heifers, will be required to certify in writing at the time of entry, to the weight of the milk, or to the weight of butter, as the case may be, during each of the six days commencing with the first Monday in June, and the corresponding six days in September, and to the manner of keeping and general management. Cows that calve near or after the first Monday in June, may be tried at another time.

Competitors will be required to state the time of last calving of their cows.

HEIFERS.

Committee.—A. B. Davis, Clinton; Silas Hosmer, Fitchburg; Edmund Houghton, Lunenburg; Franklin Nourse, Sterling; Samuel Hayward, Ashby.

Intended to be kept for the Dairy.

Two years old. Two premiums—$4, 3.
Yearlings. Two premiums—$3, 2.

HEIFER CALVES.

Committee.—J. E. Merriam, Princeton; Henry A. Woods, Leominster; Geo. Billings, Lunenburg; Porter F. Page, Westminster, Augustus Hubbard, Ashby.

Calves more than four months old. Two premiums—$4, 3.
Calves more than four months old, raised by hand. Two premiums—$4, 3.

Persons exhibiting calves raised by hand, shall furnish statements to the Secretary, of the manner of raising.

YEARLING STEERS AND STEER CALVES.

Committee.—Thomas Sheldon, Geo. O. Stickney, Fitchburg; Jas. H. Laws, Ashburnham; Ephraim Johnson, Leominster; John Fairbanks, Lunenburg.

Yearlings. Two premiums—$3, 2.
Trained Yearlings. Two premiums—$3, 2.
Calves. Two premiums—$6, 4.
Calves raised by hand. Two premiums—$6, 4.
Trained Calves. Two premiums—$4, 3.
Best Minor Trainers. Two premiums—$3, 2.

Persons exhibiting calves raised by hand, shall furnish a statement to the Secretary of the manner of raising.

PENS OF CALVES.

Committee.—Joseph Whitney, Sterling; Joel Page, Fitchburg; Henry W. Gill, Princeton; John G. Woodward, Ashburnham; Geo. L. Rice, No. Leominster.

Best pen of Calves, not less than four. Two premiums—$10, 5.

Calves entered in Pens of Calves cannot compete for premiums as single animals.

WORKING OXEN—SINGLE TEAMS.

Committee.—Solon Carter, Leominster; W. W. Shattuck, Silas Pratt, Fitchburg; Geo. G. Sampson, Ashburnham; Reuben Vose, Jr., Winchendon.

Working Oxen. Five premiums—$7, 6, 5, 4, 3.
Best Minor Teamsters. Two premiums—$5, 3.

The Working Oxen will be tried attached to loads weighing, including the cart, one-third more than themselves.

STEERS MORE THAN TWO YEARS OLD.

Committee.—Geo. Woods, Leominster; Frank P. Putnam, Fitchburg; Josiah Page, W. Fitchburg; George Howard, Ashburnham; Aaron P. Whitney, Lunenburg.

Three years old. Two premiums—$5, 4.
Best Minor Teamster. Two premiums—$4, 2.

The three years old steers will be attached to carts and tried like the oxen on the same ground; the cart and load to equal the steers in weight.

Two years old. Two premiums—$4, 3.
Trained Two years old. Two premiums—$4 2.
Best Minor Trainers. Two premiums—$3. 2.

FAT CATTLE.

Committee.—Estabrook Moore, Leominster; John Lowe, T. Benton Works, Fitchburg; Wm. H. Sawyer, Sterling; Amasa Bancroft, Gardner.

Best Fat Ox. Two premiums—$8, 5.
Best Fat Cow. Two premiums—$6, 3.
Best fat Steer or Heifer. Two premiums—$6, 4.

All competitors with fat cattle must furnish a statement to the Secretary, of the mode and expense of feeding.

SWINE.

Committee.—Herbert Ingalls, Abel Derby, Fitchburg; John Page, No. Leominster; Marshall White, Ashburnham; Geo. Kendall, Sterling.

Must be entered like other stock.

Boars more than one year old. Two premiums—$4, 3.

Less than one year old. Two premiums—$3, 2.
Best Fat Hogs, having regard to age. Two premiums—$8, 4.
Fat Pigs less than eight months old—Two premiums—$4, 2.
Breeding Sows. Two premiums—$8, 4.
Weaned Pigs, not less than four. Two premiums—$4, 2.

All Swine, and each litter of Pigs, will be allowed fifteen cents mileage for each mile more than two, that they are brought.

SHEEP.

Committee.—Jacob P. Hazen, Shirley Village; Daniel North, Wm. H. Vose, Chas. Fessenden, Wm. Gould, Fitchburg.

Flocks. Two premiums—$10, 5.
Bucks. Two premiums—$5, 3.
Cossets. Two premiums—$2, 1.
Flocks of Lambs. Two premiums—$4, 2.

Flocks of sheep must contain at least six, owned by one person. Lambs less than six months old cannot compete as sheep.

POULTRY.

Committee.—Cyrus Kilburn, Lunenburg; S. A. Tisdale, Leominster; E. P. Downe, Mrs. L. B. Fisher, Miss Jennie Farwell, Fitchburg.

Must be entered like other stock.

Barn-yard fowls, not less than three.

Brahmas. Two premiums—$2, 1.
Black Spanish. Two premiums—$2, 1.
White Leghorns. Two premiums—$2, 1.
Any other breed. Two premiums—$2, 1.
Turkeys, not less than three. Two premiums—$3, 2.
Geese, not less than three. Two premiums—$3, 2.
Ducks, not less than three. Two premiums—$3, 2.

TOWN TEAMS.

Committee.—E. W. Stone, Otter River; Josiah Puffer, Harvard; Leonard Downe, Abel Marshall, Fitchburg; John Davis, Ashby.

Best Town Teams, not less than fifteen yoke from any one town; Two premiums—$30, 20.

These teams may consist of either oxen or steers, or both.

FOOT RACE.

Committee.—Geo. B. Proctor, S. J. M. Weston, James Daley, Herbert D. Goodridge, Fitchburg; Jonas W. Gates, Leominster.

One race each day.

Half mile heats. Four premiums—$5, 4, 3, 2.
Three entries to be made.

A person having previously received one premium, can only compete for a higher.

HORSES.

Entries for all horses where entrance fee is required to be paid, must be made before 9 o'clock A. M. of the day on which they are exhibited.

GENTLEMEN'S DRIVING HORSES—SINGLE.

Committee.—Ohio Whitney, Ashburnham; Cephas Derby, Leominster; Chandler H. Loring, Sterling; S. W. A. Stevens, So. Gardner; Geo. H. Proctor, Fitchburg.

Gentlemen's Driving Horses. Four premiums—$6, 4, 3, 2.
Entrance fee, $1.

Speed considered, but not to govern.

In the trial of horses in this class, they shall make a standing start from the Judges' stand.

WALKING HORSES.

Committee.—John W. Dickinson, Charles H. Brown, Fitchburg; Antipas Maynard, Ashburnham; Edwin Gates, No. Leominster; Jesse Foster, Ashby.

Walking Horses. Four premiums—$6, 4, 3, 2.
Entrance fee, $1.

Horses entered in this class will be required to walk one mile, carrying a load to equal their own weight including the carriage.

MATCHED DRIVING HORSES.

Committee.—A. L. Burditt, Leominster; John F. Brown, Lunenburg; Henry C. Hill, Gardner; Lyman Patch, L. P. Comee, Fitchburg.

Matched Driving Horses. Four premiums—$6, 4, 3, 2.
Entrance fee, $1.

FAMILY HORSES—SINGLE.

Committee.—Wm. Woodbury, E. T. Miles, Fitchburg; M. T, Gardner, Wm. H. Wetherbee, Shirley Village; James H. Marshall, No. Leominster.

Family Horses, Single. Four premiums—$6, 4.
Entrance fee, $1.

COLTS.

Committee.—Warren Simonds, Baldwinville; Wm L. Brown, Lunenburg; Chas. H. Brown, Joel Hayward, Ashby; Wm. H. Richardson, Sterling.

Stallions, three years old. Two premiums—$10, 5.
Geldings, three years old. Two premiums—$10, 5.
Fillies, three years old. Two premiums—$10, 5.
Stallions or Geldings, two years old. Two premiums—$6, 3.
Fillies, two years old. Two premiums—$6, 3.
Yearling Colts. Two premiums—$5, 3.

STALLIONS.

Committee.—Alfred Hitchcock, Francis Buttrick, Fitchburg; S. F. Whitney, Harvard; D. W. Salisbury, Leominster; Edwin Hill, Gardner.

Best Stallions for general use, four years old and upwards. Two premiums—$10, 5.

Stallions entered in this class will be required to exhibit specimens of their stock.

MARES AND SUCKING COLTS.

Committee.—Dr. James O. Parker, Shirley Village; Levi Kendall, Fitchburg; Oliver Patch, Leominster; Horace H. Brown, Fitchburg; Wm. H. Brown, E. Princeton.

Breeding Mares. Two premiums—$8, 5.
Colts less than one year old. Two premiums—$4, 3.

The mares must be four years old and upwards, and accompanied by their colts.

No premium shall be awarded to a mare known to be unsound.

DRAUGHT HORSES.

Committee.—Rodney Wallace, James P. Putnam, Thomas Palmer, Fitchburg; Mahlon S. Heath, Lunenburg; Timothy Lincoln, Leominster.

Draught Horses, Pairs. Two premiums—$6, 4.
Draught Horses. Two premiums—$5, 3.

Draught Horses will be tried attached to a stone boat loaded to weigh, including the stone boat, one-fourth more than the horses.

The same draught horse cannot receive a premium as a single horse and also one of a pair, but a draught horse may compete as a family horse.

These must be four years old and upwards.

PLOWING MATCH.

All entries for plowing must be made on or before the Thursday previous to the exhibition, and one dollar must be deposited with each entry, to be returned to the competitor if he plows, otherwise forfeited to the Society.

No teams, or parts of teams, will be allowed to compete for more than one premium on plowing.

DOUBLE TEAMS.

Committee.—Samuel Osgood, Sterling; Hubbard B. Fuller, Levi White, Fitchburg; Joseph Cozzens, Leominster; Howard Gates, Ashby.

Double Teams. Three premiums—$10, 7, 5.
Minors, with Steers. Three premiums—$6, 4, 2.

SINGLE TEAMS.

Committee.—Whiting Gates, Leominster; Edwin Sawyer, Baldwinville; Edward Bacon, Westminster; Benj. Wyman, Wachusett; Isaac D. Ward, Ashburnham.

Single Teams. Three premiums—$10, 7, 5.
Minors, with Steers. Three premiums—$6, 4, 2.

HORSE TEAMS.

Committee.—D. C. Miles, Westminster; Natt Cowdin, Lewis G. Tuttle, Leonard Hartwell, Fitchburg; Addison Howe, Ashburnham.

Horse Teams. Three premiums—$10, 7, 5.

CROPS.

All entries for premiums in this department must be made with the Secretary, on or before June 15th, with the exception of English turnips and cabbages, which must be entered on or before August 15th.

Immediately after these dates, the Secretary will transmit to all competitors a copy of the following blank form, adopted by the Trustees, to correspond with the requirements of the Board of Agriculture.

In pursuance of authority delegated to the Board of Agriculture, by chap. 24 of the Acts of 1862, Agricultural Societies receiving the bounty of the State, are required to make use of the following form, and be governed by its conditions, in the mode of ascertaining the amount of crops entered for premium :

Worcester North Agricultural Society.

Statement concerning a crop of , raised by Mr. , in the town of , 1873.

What was the crop of 1869 ?
What manure was used, and how much ?
What was the crop of 1870 ?
What manure was used, and how much ?
What is the nature of the soil ?
When, and how many times plowed, and how deep ?
What other preparation for the seed ?
Cost of plowing and other preparation ?
Amount of manure, in loads of thirty bushels, and how applied ?
Value of manure upon the ground ?
When and how planted, and the amount and kind of seed ?
Cost of seed and planting ?
How cultivated, and how many times ?
Cost of cultivation including weeding and thinning ?
Time and manner of harvesting ?
Cost of harvesting, including the storing and husking or threshing ?
Amount of straw, stover, or other product ?

Competitors for premiums are particularly requested to make any statements or suggestions not elicited by the above questions, and which may be valuable as contributions to agricultural information.

REMARKS.

The Committee to whom is entrusted the award of premiums on field crops, may award the premiums according to their judgment ; but, for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, and give all possible information thereon, over their signatures, and return the same to the Secretary of the Society, to be published in the annual Transactions.

In ascertaining the amount of crop, any vessel may be used, and the weight of its contents once, multiplied by the number of times it is filled by the crop.

The certificate shall state the weight of all crops only in a merchantable state.

In measuring the land, any competent person may be employed, whether a sworn surveyor or not.

In ascertaining the amount of a hay crop, entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE.

Practised and adopted by the State Board of Agriculture.

Wheat, Potatoes, Sugar Beets, Mangel Wurzel, Ruta Bagas, White Beans and Peas,	60	lbs.	to the	bushel.
Corn, Rye,	56	"	"	"
Oats,	32	"	"	"
Barley, Buckwheat,	48	"	"	"
Cracked Corn, Corn and Rye and other meal, except Oat, and English Turnips,	50	"	"	"
Parsnips,	45	"	"	"
Carrots,	55	"	"	"
Onions,	52	"	"	"

GRAIN.

Committee.—Stillman Stone, Lunenburg; Augustus Gates, Leominster; Seth Lowe, Abel Marshall, Fitchburg; Asaph Wood, So. Gardner.

The committee may award gratuities for valuable new varieties of grain.

For the most profitable crops of corn, wheat, rye, barley, and oats, one acre each; of cabbages, beans, and flax, one-eighth acre each; the product of corn to be not less than 4320 lbs. on the cob; that of wheat, rye, barley, and oats, not less than 1000 lbs. of grain each.

Corn. Two premiums—$10, 8.
Wheat. Two premiums—$10, 8.
Rye. Two premiums—$4, *Grasses and Forage Plants.*
Barley. Two premiums—$4, *Grasses and Forage Plants.*
Oats. Two premiums—$4, *Grasses and Forage Plants.*
Field Beans. Two premiums—$2, *Grasses and Forage Plants.*

Samples must be exhibited at the Fair.

ROOT CROPS AND CABBAGES.

Committee.—Ephraim Graham, Lunenburg; Hobart Spencer, Ashby; Ebenezer Bird, Leominster; Wm. Baker, Lunenburg; Ezra Kendall, Sterling.

For the most profitable crops of potatoes, one-fourth acre each; of carrots, onions, beets and turnips, one-eighth acre each.

Potatoes, not less than 3000 lbs. Two premiums—$8, 5.
Carrots, not less than 5500 lbs. Two premiums—$4, 3.
Onions, not less than 2000 lbs. Two premiums—*Harris on Ins.*, $2.
Sugar Beets. Two premiums—$2, 1.
Mangel Wurzel. Two premiums—$2, 1.
English Turnips. Two premiums—*Harris on Insects*, $2.
Turnips of any other variety. Two premiums—*Harris on Insects*, $2.
Cabbages. Two premiums—$2, 1.

FARMS.

Committee.—Geo. S. Houghton, Fitchburg; C. C. Boyden, Leominster; Ohio Whitney, Ashburnham.

All entries must be made at least one week before commencing the experiments.

Best managed and cultivated Farm, to be awarded and paid in 1874. Two premiums—$50, 25.

Entries must be made on or before May 1st, 1873.

GARDENS.

Committee.—Jabez Fisher, L. H. Bradford, Fitchburg, Emory Burrage, Leominster.

Kitchen or Mixed Gardens. Two premiums—$12, 8.
Flower Gardens. Two premiums—$4, 2.

No person having received a premium for a farm, kitchen or mixed garden, shall be allowed to compete for another with the same land, within five years, except for a higher one.

Entries must be made on or before June 15th.

EXPERIMENTS.

Committee.—Augustus Whitman, Leominster; Joel Page, Fitchburg; Ezra Kendall, Sterling.

Best Experiment to determine the best and most profitable time and condition in which to cut grass for hay, having regard to the total annual product. Two premiums—$15, 10.

Best Experiment testing the value of corn and cob for fattening purposes, with the cob or otherwise. One premium—$15.

Best Experiment in steaming food for cattle and horses. One premium—$10.

Best Experiment testing the comparative value of drilling wheat or other grain, to broadcast sowing. One premium—$5.

There will be placed at the disposal of the committee, for the best and most reliable agricultural experiments of any kind, made in 1873, the sum of twenty dollars.

EXHIBITION AT THE HALL.

No article intended for the Hall will be entitled to a premium unless it shall have been deposited by ten o'clock A. M., on Tuesday.

All articles should be plainly marked with the name and residence of the exhibitor, except samples of Bread and Butter, which must be desgnated by numbers. A strict compliance with these regulations will be absolutely necessary to entitle competitors to any premiums that may be awarded to them.

APPLES, PEACHES, PLUMS AND QUINCES.

Committee.—Levi Heywood, Gardner; Jabez Fisher, Benj. Snow, Dr. George Jewett, Fitchburg; Porter Piper, Leominster.

APPLES.

Twelve varieties of five specimens each. Two premiums—*Harris on Insects*, $2.
Six varieties of five specimens each. Two premiums. $2, 1.50.
Three varieties of five specimens each. Two premiums—$1.50, 1.
Best exhibition of twelve specimens of Baldwins. Two premiums—$1, .50.
Hubbardston Nonsuch. Two premiums—$1, .50.
R. I. Greenings. Two premiums—$1, .50.
Roxbury Russets. Two premiums—$1, .50.
Gravensteins. Two premiums—$1, .50.
Palmer Greenings. Two premiums—$1, .50.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the

number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

PEACHES.

Best Collection. One premium—*Harris on Insects.*
Best Dishes or Baskets. Two premiums—$2, 1.

PLUMS.

Best Collection. One premium—$2.
Best Plates. Two premiums—$1, .50.

QUINCES.

Best Dishes or Baskets. Two premiums—$1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

PEARS AND GRAPES.

Committee.—Wm. B. Hosmer, Leominster; Jerome B. Gardner Shirley Village; Benj. Safford, Fitchburg; Daniel Putnam, Lunenburg; H. Marcellus Heywood, Sterling.

PEARS.

Twelve varieties of twelve specimens each. Two premiums—*Harris on Insects*, $2.
Six varieties of five specimens each. Two premiums—$2, 1.50.
Three varieties of five specimens each. Two premiums—$1.50, 1.
Best exhibition of twelve specimens of Bartlett. Two premiums—$1, .50.
Seckel. Two premiums—$1, .50.
Flemish Beauty. Two premiums—$1, .50.
Duchess. Two premiums—$1, .50.
Louise Bonne de Jersey. Two premiums—$1, .50.
Lawrence. Two premiums—$1, .50.
Beurre d' Anjou. Two premiums—$1, .50.
Sheldon. Two premiums—$1, .50.

GRAPES.

Best displays of varieties of Native Grapes. Two premiums—$5, 3.
Best Six Clusters Concord. Two premiums—$1, .50.
Best Six Clusters Delaware. Two premiums—$1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit ; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

ASSORTED FRUITS AND FLOWERS.

Committee.—Mrs. Stephen Shepley, Mrs. Chas. Mason, Mrs. J. F. D. Garfield, Mrs. B. Snow, Fitchburg ; Mrs. M. T. Gardner, Shirley Village.

ASSORTED FRUITS.

Best Dishes or Baskets. Two premiums—$2, 1.

PLANTS IN POTS.

Best displays of named Plants in Pots. Two premiums—$2, 1.
Best three named Plants in Pots. Two premiums—$2, 1.

CUT FLOWERS.

Best display of Cut Flowers. Two premiums—$2, 1.
Best five named Asters. Two premiums—$2, 1.
Best five named Dahlias. Two premiums—$2 1.
Best five named Verbenas. Two premiums—$2, 1.
Best pair of Parlor Bouquets. Two premiums—$2, 1.
Best pair of Hand Bouquets. Two premiums—$2, 1.

The same plants in pots cannot compete for both the best display and the best three ; nor can the same Asters, Dahlias, or Verbenas, compete for the best display and the best five.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to receive more than one copy of *Harris on Insects ;* if more than one is awarded, cash will be paid instead, at the rate of three dollars per copy ; and if any to whom a copy is awarded, already has one, he may receive the copy awarded, or the cash, as above, at his option.

VEGETABLES.

Committee.—Jacob H. Fairbanks, Lawrin Pratt, Fitchburg ; Martin Johnson, Lunenburg ; Amos B. Holden, Westminster ; John M. Stevenson, Sterling.

Best collections Kitchen Vegetables. Two premiums—$7, 5.
Best collections Garden Seeds. Two premiums—$5, 3.

Collections of Potatoes. Two premiums—$2, 1.
Marrow Squashes. Two premiums—$1, .50.
Hubbard Squashes. Two premiums—$1, .50.
Crookneck Squashes. Two premiums—$1, .50.
Pumpkins. Two premiums—.75, .50.
Cabbages. Two premiums—.75, .50.
Cauliflowers. Two premiums—.75,.50.
Celery. Two premiums—.75, .50.
Onions. Two premiums—.75, .50.
Turnip Beets. Two premiums—.75, .50.
English Turnips. Two premiums—.50, .25.
Tomatoes. Two premiums—.50, .25.
Field Beans. Two premiums—.50, .25.
Lima Beans. Two premiums—.50, .25.
Seed Corn, in traces. Two premiums—$1, .75.

The committee will regard perfection of growth and quality, and not size.

In addition to the above, there will be allowed for gratuities, ten dollars.

Of squashes, pumpkins, cabbages and celery, there should be six specimens in each lot; of cauliflowers, three; of onions, beets, turnips and tomatoes, one peck in each lot; of field beans, one-half peck; and of Lima beans, two quarts.

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES AND JELLIES.

Committee.—Mrs. Thomas Palmer, Mrs. Ebenezer Torrey, Mrs. Leonard Downe, Fitchburg; Mrs. John H. Lockey, Leominster; Mrs. Cyrus Kilburn, Lunenburg.

Bread made by unmarried ladies.
White Bread. Three premiums—$2, 1, .50.
Unbolted Wheat Bread. Three premiums—$2, 1, .50.
Bolted Rye Bread. Three premiums—$2, 1, .50.
Rye and Indian Bread. Three premiums—$2, 1, .50.

Bread made by married ladies.
White Bread. Three premiums—$2, 1, .50.
Unbolted Wheat Bread. Three premiums—$2, 1, .50.
Bolted Rye Bread. Three premiums—$2, 1, .50.
Rye and Indian Bread. Three premiums—$2, 1, .50.

All bread offered for premiums must have been baked on the Monday preceding the exhibition.

BUTTER AND CHEESE.

Lump Butter, not less than 12 lbs. Two premiums—$4, 3.
June Tub Butter, not less than 25 lbs. Two premiums—$3, 2.
Sept. " " " Two premiums—$3, 2.
Cheese, not less than 50 lbs. Two premiums—$2, 1.50.

PICKLES AND HONEY.

Pickles. Two premiums—$1, .50.
Virgin Honey in the Comb. Three premiums—$2, 1, .50.
Canned Fruits, best collection. Two premiums—$2, 1.

In addition to the above, there will be allowed for gratuities, ten dollars.

Competitors will be required to furnish, to the Secretary, a detailed statement in writing, of the process of manufacturing butter, cheese, and pickles ; and no others shall be considered.

MACHINERY.

Committee.—J. G. Folsom, Baxter D. Whitney, Winchendon ; Chas. Heywood, Gardner ; John Q. Wright, Aaron Wilkins, Fitchburg.

For the best specimens of machinery manufactured by the competitor, there will be placed at the disposal of the committee the sum of one hundred and fifty dollars.

MANUFACTURED ARTICLES.

Committee.—John H. Lockey, Leominster ; E. F. Bailey, J. F. Haskins, Fitchburg ; Orlando Mason, Winchendon ; Ivers White, Ashburnham.

Specimens exhibited must be manufactured by the competitor.

For the best *specimens* of manufactured articles, exclusive of ladies' home manufacture, actually produced by the exhibitor, there will be placed at the disposal of the committee, the sum of one hundred dollars.

For the best *exhibition* of manufactured articles, not actually the product of the exeibitor, there will be placed at the disposal of the committee the sum of fifty dollars.

AGRICULTURAL IMPLEMENTS.

Committee.—Francis A. Whitney, Ashburnham ; Edward Burpee, Sterling ; Edward Bacon, Westminster ; Geo. Davis, Shirley Village ; Edwin A. Goodrich, Fitchburg.

Best Farm Wagon, for one or two horses. One premium—$10.
Best Ox Cart. One premium—$5.
Best Team Harness. One premium—$5.

Best Hay or Straw Cutter. One premium—$3.
Best Ox Yoke complete. One premium—$3.
Best Set Horse Shoes. One premium—$2.

In addition to the above, there will be allowed for gratuities, twenty dollars.

FINE ARTS.

Committee.—L. H. Bradford, Mrs. Joel Page, Mrs. J. F. Haskins, Miss Louise M. Haskell, Fitchburg; Mrs. Dr. Peirce, Leominster.

Best collection by a Photographic Artist. Two premiums—$4, 2.
Oil Paintings. Two premiums—$4, 2.
Best Crayon Drawings. Two premiums—$3, 2.
Pencil Drawings. Two premiums—$2, 1.
Best specimen of Penmanship by a non-professional. One prem.—$1.

In addition there will be placed at the disposal of the committee, for gratuities, the sum of twenty dollars.

Specimens exhibited must be actually executed by the competitor.

FANCY ARTICLES.

Committee.—Rev. F. Magwire, Mrs. E. T. Miles, Mrs. Lorenzo Baker, Mrs. T. Palmer, Mrs. J. F. Stiles.

For the best specimens of Ladies' Useful and Fancy Articles of their own manufacture, including specimens of nice mending and darning, there will be placed at the disposal of the committee, the sum of thirty dollars.

ESSAYS.

Committee.—Charles Mason, Fitchburg; Rev. J. Horton, C. H. Merriam, Leominster.

Best Essays on some practical subject connected with agriculture, deemed worthy of publication in the Society's "Transactions." Two premiums—$25, 15.

All persons competing for these premiums must file their Essays with the Secretary on or before the 1st of September. Each Essay is to be marked with a motto or design, and accompanied with a sealed envelope bearing a corresponding motto or design, and containing the name of the author.

The envelopes of the successful competitors will be opened on the day of the Exhibition, immediately upon the announcement of the awards.

COMMITTEES' REPORTS.

Committee.—The President, Vice Presidents and Secretary.

For the purpose of inducing the chairmen of the several committees to take upon themselves more labor and care in elaborating their reports, the following premiums will be paid :—$10, 6, 4.

Detailed reports in connection with awards (except on Grain and Root Crops), must be delivered to the Secretary on or before Nov. 1st.

PROSPECTIVE—EXPERIMENTS.

Committee.—Jabez Fisher, Joel Page, Fitchburg ; Cyrus Kilburn, Lunenburg.

For the best Experiment going to show the economy of growing grass constantly through a period of six years, on one acre or more of land, as compared with a rotation in which grass shall be grown three or four years only, the remainder being grain or hoed crops, of which one, at least, shall be Indian corn. The total amount and kind of manure in each case must be the same per acre, but the time and mode of application may be different. Three premiums—$50, 25, 15.

Entries must be made on or before July 1st, 1873.

APPLE, PEAR AND PEACH ORCHARDS.

Committee.—Geo. S. Houghton, Thomas Palmer, Fitchburg; Ephraim Graham, Lunenburg.

APPLE ORCHARDS.

For the best Orchards of not less than fifty trees, all having been set after January 1st, 1871, to be awarded in 1875. Two premiums —$25, 10.

PEAR ORCHARDS.

For the best Orchards of not less than fifty trees, all having been set after January 1st, 1872, to be awarded in 1876. Two premiums —$25, 10.

PEACH ORCHARDS.

For the best Orchards of not less than thirty trees, set after April 1st, 1871, to be awarded and paid in 1874. Two premiums—$12, 8.

One orchard was entered for this premium, in 1871, by Lawrin Pratt of Fitchburg.

POTATOES.

Committee.—Ephraim Graham, Cyrus Kilburn, Lunenburg; Benjamin Safford, Fitchburg.

For the best Seedling Potatoes, to be tested for not less than three successive years. One premium—$25.

FOREST TREES.

Committee.—W. B. Hosmer, George Merriam, Leominster; J. P. Putnam, Fitchburg.

For the best plantation of any kind of Forest Trees, suitable for fuel or timber, raised from the seed, not less than five hundred in number, which shall be in the most flourishing condition in the fall of 1876. Three premiums—$25, 15, 10.

Entries must be made on or before the 1st day of June.

ICE HOUSES.

Committee.—William Woodbury, Abel Marshall, Fitchburg; Lyman N. Fairbanks, Westboro'.

For the best constructed Ice House for family purposes, to be tested at least twelve months. One premium—$5.

TROUT.

Committee.—Jabez Fisher, L. H. Bradford, Fitchburg; M. T. Gardner, Shirley.

For the most successful Experiments in the artificial propagation of Trout, entries to be made on or before June 1st, 1872; premiums to be awarded in 1874. Two premiums—$25, 10.

For best Trout, not less than six in number, raised artificially, exhibited at the Fair in 1873. Two premiums—$5, 3.

COMMITTEE OE ARRANGEMENTS.

STEPHEN SHEPLEY, Fitchburg.
JOSEPH COZZENS, Leominster.
J. M. SAWTELL, Fitchburg.
GEO. S. HOUGHTON, Fitchburg.

RULES.

All teams entered for draught must have been owned by the person entering the same, for at least three months next previous.

Any person competing for a premium, who shall serve on the committee having charge of the department in which he competes, shall retire from the committee while his own competition is in question.

The several committees will not consider themselves bound by the terms of the above offers, to award a premium for anything which they shall deem inferior.

Any person to whom a premium shall have been awarded, in consequence of any deception or misrepresentation used by him, shall not only forfeit such premium, but afterward be incapable of competing for the Society's premiums.

All persons, not members of the Society, to whom may be awarded a premium, or premiums, amounting to five dollars or upward, shall receive a certificate of membership for five dollars, and the balance in cash. If the amount shall be less than five dollars, a deduction of fifty per cent. will be made, unless the individual chooses to make the amount up to that sum, and receive a certificate of membership.

All premiums not demanded on or before November 30th, will revert to the Society.

OFFICERS OF THE SOCIETY FOR 1873.

Elected at the Annual Meeting, December 4, 1872.

STEPHEN SHEPLEY of Fitchburg, *President*
J. M. SAWTELL of Fitchburg, } *Vice Presidents.*
JOSEPH COZZEFS of Leominster, }
GEO. S. HOUGHTON of Fitchburg, *Sec'y and Treasurer.*

-•-

TRUSTEES:

O. Whitney, Ashburnham.	Edward Bacon, Westminster.
Joel Hayward, Ashby.	Reuben Vose, Winchendon.
Dennis Fay, "	Joseph Cushing, Fitchburg.
S. W. A. Stevens, Gardner.	Jabez Fisher, "
S. F. Whitney, Harvard.	Abel Marshall, "
W. B. Hosmer, Leominster.	Joel Page, "
C. C. Boyden, "	Lyman Patch, "
John H. Lockey, "	E. T. Miles, "
Cyrus Kilburn, Lunenburg.	Wm. Woodbury, "
Eph'm Graham, "	S. C. Wright, "
J. E. Merriam, Princeton.	James Goodrich, "
A. Stockwell, Royalston.	John F. Haskins, "
J. O. Parker, Shirley.	E. P. Monroe, "
F. Nourse, Sterling.	Chas. Fessenden, "
W. Simonds, Templeton.	J. Q. Wright, "
D. C. Miles, Westminster.	L. Aldrich, "

E. T. MILES of Fitchburg, elected *Member of the State Board of Agriculture*, Dec. 6, 1871, for three years.

TRANSACTIONS

OF THE

WORCESTER NORTH

Agricultural Society

FOR 1873,

TOGETHER WITH A LIST OF THE

COMMITTEES AND PREMIUMS FOR 1874.

FITCHBURG:
REVEILLE STEAM PRINTING WORKS.
1874.

SECRETARY'S REPORT.

The twenty-first annual exhibition was held at the grounds of the Society, on Tuesday and Wednesday, Sept. 23d and 24th.

The exercises of the first day began with a plowing match at 10 o'clock A. M., which was followed by exhibitions of steers and town teams. A clam bake dinner was served at 1½ o'clock in the dining hall. The President of the Society, Stephen Shepley, presided, and Rev. Dr. Grant invoked the Divine blessing. At the close of the dinner, Mr. Shepley introduced His Excellency, Gov. Washburn, who addressed those present on subjects of agricultural interests. He was followed by J. O. Adams, Esq., who spoke on "Our Relations to the Soil."

In the afternoon, trials of working oxen, working oxen and horses, and foot and wheelbarrow races took place.

The second day opened at 9½ o'clock A. M., with a grand cavalcade, followed by trials of draft horses and exhibitions of walking and family horses.

At 1 o'clock after the Rev. Mr. Spring had invoked the Divine blessing, the grand barbecue dinner took place in the hall. Addresses were delivered by His Honor, Mayor Norcross, Prof. C. O. Thompson, Senator Boutwell and Congressman Crocker.

The remainder of the day was consumed by exhibitions of gents' driving horses, foot and potato races, and trials of matched driving and chaise horses.

The Society was not so fortunate in respect to weather, as it has heretofore been. The gloomy, threatening sky of Tuesday, and the heavy rain of the following morning, doubtless kept many away. The beautiful afternoon of Wednesday, although of great assistance, came too late to make the fair a financial success. The show of thorough-bred and native stock was small; that of thorough-bred very good so far as it went. The Jerseys belonging to Mr. Brown, attracted considerable attention. The absence of familiar herds was noticeable. It is hoped that under the new

rules, the exhibitions of former years will be more than equalled. There was a much better show of sheep than in former years. Of swine and poultry, about the usual number.

The display of fruits, flowers, and the finer manufactured articles was very fine.

In marked contrast with the department of stock, was that of mechanics. This was thronged with visitors, and it well repaid their careful attention. The Secretary regrets that want of space prevents further notice.

Gen. Kimball, the Chief Marshal, and his aids, preserved the best of order throughout the two days.

Great credit is due to the President, Mr. Shepley, Mr. J. F. Haskins, Dr. Palmer and others, for their unceasing efforts to make the exhibition successful.

The experience of the past year has shown a thing which indeed, needed no demonstration, that one, two or three men cannot make a fair—that the combined efforts of all are necessary to attain this end. Members of the Society and especially the Committees should feel that they each have an interest in the exhibition.

And too, can we say that we make any return for the bounty given us by the state? The printed transactions should contain valuable information for the public. Now the reports of committees are the sources to which the public goes to obtain this information; without them, the annual printed record is worthless.

What we need then, is more interest and energy in the committees and members. With these we can have no doubt as to the success of our next annual exhibition.

Fr. G. Fessenden, *Secretary.*

REPORTS OF COMMITTEES.

THOROUGH-BRED STOCK.

The progress made in the past twenty-five years in cattle husbandry has been a decided mark of improvement. The hap-hazard or accidental cow of no definite breed, is fast giving place to the Thorough-bred, and the future progressive improvement of our dairy stock can be relied upon with unerring certainty. The prejudice against the pure bred animal is fast giving way or changing in their favor.

The intelligent farmer will not run the risk, or incur the expense of raising a calf from progenitors, accidentally good, which have no strength of blood to reproduce their like, but in the breeding point, we must raise our calves from pure breeds only, to be in any degree successful. We now have, (thanks to the intelligent breeders of foreign countries), several pure breeds of stock whose especial characteristics are adapted to the farms and the markets of our county; and our State and county contains these breeds of cattle in their purest excellence, as well as breeders full of enthusiasm in their intelligent calling. With such men and such animals our county may well be hopeful for a prosperous future. That breeds of cattle of foreign origin are susceptible of improvement in this country there can be no doubt. Time has fully demonstrated the fact. Even the shorthorns have outdone the shorthorns that were, with the judicious care of the American breeder. The fabulous prices that have been recently paid by gentlemen from England indicates their scale of improvement. The Ayrshires are twenty per cent. larger than were the Ayrshires imported twenty-five years ago.

The general form and structure of the Jerseys have wonderfully changed. Running upon our pastures has developed both bone and muscle, and the quantity of their milk has increased in a corresponding ratio.

It is often said that the expense of keeping pure bred stock is greater than that of the native; but it is also true that stock well kept is the most remunerative to the farmer. Your committee especially commend gentlemen who exhibit good stock of any kind, as public benefactors, and they deserve the fostering care of agricultural societies.

The committee award the following premiums:

SHORTHORNS—HERDS.

Joel Page, 1st premium, $12 00

BULLS.

Joel Page, 1st prem., 8 00

BULL CALVES.

Joel Page, 1st prem., 5 00

COWS.

Joel Page, 1st prem., 6 00

HEIFERS, TWO YEARS OLD.

Joel Page, 1st prem., 4 00

HEIFERS, ONE YEAR OLD.

Joel Page, 1st prem., 3 00

JERSEYS—HERDS.

J. F. Brown, 1st prem., 12 00

BULLS.

J. F. Brown, 1st prem., 8 00

BULL CALVES.

J. F. Brown, 1st prem., 5 00

COWS, FOUR YEARS OLD.

J. F. Brown, 1st prem., 6 00
" " 2d prem., 4 00

COWS, THREE YEARS OLD.

J. F. Brown, 1st prem., 5 00
" " 2d prem., 3 00

HEIFERS, TWO YEARS OLD.

J. F. Brown, 1st prem.,	4 00
" " 2d prem.,	2 00

HEIFER CALVES.

J. F. Brown, 1st prem.,	3 00
" " 2d prem.,	2 00

AYRSHIRE—HEIFERS, ONE YEAR OLD.

John H. Lockey, 1st prem.,	3 00

Mr. Lyman Nichols had on exhibition a fine herd of Jerseys, which would have taken premiums if they had been entered for competition, but are highly commended by the committee.

Your committee also regret the absence from your grounds, of some of the finest herds of Shorthorns and Ayrshires to be found in the Commonwealth and owned by members of your society.

O. B. HADWEN, *Acting Chairman.*

STOCK NOT THOROUGH-BRED—MILCH KINE.

The committee award the following premiums:

BEST HERD.

N. B. Reed, 1st premium,	$10 00

SINGLE MILCH COWS.

N. B. Reed, 1st premium,	$5 00
Liberty Wellington, 2d prem.,	4 00

MILCH HEIFERS, THREE YEARS OLD.

N. B. Reed, 1st premium,	$5 00

HEIFERS, THREE YEARS OLD, FOR BUTTER.

Benjamin Safford, 1st prem.,	5 00

For the Committee, SAMUEL OSGOOD, *Chairman.*

Statement of N. B. Reed.

I enter for premium one herd of cows, fourteen in number. Their ages are from three to seven years. Breed, Shorthorn and

Devon; were all bred by myself; have had common pasture with two quarts of shorts and meal mixed. The three oldest calved in March, the other in June. Their weight of milk is as follows:

JUNE TRIAL.	SEPTEMBER TRIAL.
Cow No. 1, 312 pounds.	Cow No. 1, 240 pounds.
" " 2, 252 "	" " 2, 210 "
" " 3, 250 "	" " 3, 204 "
" " 4, 210 "	" " 4, 180 "

Statement of Liberty Wellington.

The cow which I offer for premium is seven years old; calved the twentieth day of April last. Her keeping has been ordinary pasture and three pints of Indian meal per day. The general management has not been different from that of other people, so far as I know.

The No. of lbs. of milk she gave:

Mon. June	2d,	45¼.	Mon. September	8th,	34¼.
Tues. "	3d,	44¾.	Tues. "	9th,	33½.
Wed. "	4th,	45.	Wed. "	10th,	33¼.
Thur. "	5th,	45½.	Thur. "	11th,	33½.
Fri. "	6th,	44¾.	Fri. "	12th,	31¾.
Sat. "	7th,	44¾.	Sat. "	13th,	33½.
Total,		270	Total,		199¼

Being unavoidably away from home the first week in September you will find that I have taken the second instead.

Statement of Benjamin Safford.

This heifer, (Belle) I offer for a premium for butter. She was three years old last spring; calved the 19th day of September, 1872; has been in milk one year to-day; is to calve again next January; made, the first six week days in June, six pounds of butter. The first six days in September she made five pounds. She is a grade Jersey. Her keeping was common pasture with two quarts of meal each day.

HEIFERS.

The Committee on heifers report as follows:

There were eight entries, all of which, in justice, demand premiums of praise, although by the rules of the society money premiums could not be awarded to all.

The heifers were generally fine specimens of Worcester county stock. Mr. N. B. Reed, of Princeton, exhibited a couple of yearlings which were the very pink of perfection in point of color and symmetry of proportion, representing fully the various commendable points of the Devon stock, so successfully bred and cultivated in New England.

Right here the committee take occasion to express regret that the society's premiums are manifestly based solely upon dairy qualifications in heifers. We do not suppose that there is need to assert in this report, the self-evident proposition that the milch cow *par excellence*, does not adequately represent the mothers of the specific breed to which she belongs. Breeders very well know that nature's balance must be preserved in the work of reproduction; else the offspring forms, in some sort, a monstrosity. The great milker does not embody many valuable characteristics of a perfect cow. Her milking qualities are obtained through careful breeding and persistent selection, somewhat at the expense of due proportion, compactness and longevity. We think the improvement of working stock is a laudable aim; hence our suggestions hereupon.

"What constitutes a perfect cow ?" is a question which involves considerations as to fitness for producing superior animals. When we succeed in the production of excessive quantities of milk, there is undoubtedly a debt due to Nature, and somewhere and at sometime, it must be paid.

Too much attention cannot be given to ante-natal causes and influences, for no amount of modifying influences will be potent to effect structural changes.

Good judges of suitable animals to rear for any given purpose, never implicitly trust to their judgment of the offspring. However "old fogyish" a man may be, he still needs must recognize the virtue of tracing pedigrees, if he has ever succeeded as a stock breeder.

All writers upon the subject of breeding animals, agree in placing the preponderance of shaping causes upon the maternal side. There is scarcely a more important interest than this one of heifers.

It matters little if "scrub" *steers* are suffered to live; but we can never calculate the extent of the mischief liable to accrue from "scrub" *heifers*. The predominant question of selection is illustrated to the comprehension of the most dull or careless.

Judicious selection takes precedence of the claims of breed; for, as Emerson observes, "Nature makes a hundred poor melons for one that is good." At any rate, there is always a sphere, and opportunity—a *need* of human sagacity in the process of keeping a given breed up to the normal standard of perfection. Hence we draw a conclusion in favor of a higher education for farmers. Men err in selection, chiefly for the reason that their total knowledge of the subject is insufficient.

Your committee cannot help urging greater care in mating heifers for first calves. Without doubt the influence of a scrub bull appears to a greater extent in both the mother and offspring than we are apt to recognize; but the *first* conception is likely to influence the whole future of the dam and her progeny. Hence we argue in favor of great care in mating a heifer for her first calf. We are by no means willing to admit that a heifer, mated with an inferior sire is *not* thereby injured, more or less. We are not so sure that a superior bull receives injury from copulating with an inferior cow. The reason is self-evident.

With respect to the treatment of heifers on "coming in," the committee have but to urge persuasive methods, let the temperament be what it may.

We have never yet seen a case of "kicking" in heifers, that we lacked faith to attempt to cure by our own proper influence, exerted without violence. A person of good muscular force, by placing the left arm against the offending leg, can usually prevent accident, and in cases of obstinacy, where perseverance in force is necessary, the gambrel of the opposite leg should be firmly grasped, thus forming an effectual bar. It is sometimes necessary to "hug" the spunky animal pretty closely, and in all cases it should be securely tied in a stable. Continue the forcible treatment till the animal gives up, and the instances are rare that require a second application. Much depends on the treatment heifers habitually receive from those who have to deal with them from calves upward. Nothing harsh, or of a nature calculated to *scare*, should be allowed among heifers, and boisterous, brutal persons should be restrained in their tendencies, if ever suffered to deal with them.

Your committee desire to make honorable mention of a heifer shown by Mr. Jefts, of Fitchburg, for which the chairman acknowledged a decided preference, but his choice failed to be sus-

tained by a majority of the members. In conclusion, the committee would urge the superlative importance of this matter of "weeding out" our stock, so that more perfect specimens constantly survive. Already the superiority of Worcester county cattle is admitted, but we should strive to infuse the spirit of progress more widely, until perfectness becomes the ruling passion among all our farmers and stock growers.

HEIFERS.

Joel Page, 1st prem.,	4 00

HEIFERS, ONE YEAR OLD.

Benj. Safford, 1st prem.,	3 00
Silas Pratt, 2d prem.,	2 00
Liberty Wellington, gratuity,	1 50
A. S. Jefts, gratuity,	1 50

A. B. Davis, *Chairman.*

YEARLING STEERS AND STEER CALVES.

Your committee submit the following:

STEERS, ONE YEAR OLD.

N. B. Reed, 1st prem.,	3 00
G. Woods, 2d prem.,	2 00

TRAINED STEERS.

N. B. Reed, 1st prem.,	3 00

MINOR TRAINER.

Walter S. Howe, 1st prem.,	3 00

Thomas Sheldon, *Chairman.*

STEERS MORE THAN TWO YEARS OLD.

The committee report:

THREE YEARS OLD.

E. D. Works, 1st prem.,	5 00

TWO YEARS OLD.

E. Johnson, 1st prem.,	4 00
Henry Woods, 2d prem.,	3 00

TRAINED, TWO YEARS OLD.

N. B. Reed, 1st prem., 3 00

MINOR TRAINER.

W. S. Howe, 3 00

G. Woods, *for Committee.*

WORKING OXEN.

The committee submit the following:

N. B. Reed, 1st prem.,	7 00
S. T. Record, 2d prem.,	6 00
Silas Pratt, 3d prem.,	5 00
Joseph Cushing, 4th prem.,	4 00
Cyrus Kilburn, 5th prem.,	3 00

MINOR TEAMSTER.

Chester Pratt, 1st prem., 5 00

Solon Carter, *Chairman.*

FAT CATTLE.

The committee report:

OXEN.

John Page, 1st prem.,	8 00
Joseph Cushing, 2d prem.,	5 00

COWS.

Joel Page, 1st prem., 6 00

In addition to our reports on fat cattle, your committee desire to make honorable mention of one exceedingly fine, large and very fat pair of oxen exhibited by Elliott Swan, of Worcester, reported to weigh some 7,580 lbs.

Those oxen vastly excell all other fat cattle on exhibition, making a very important addition to the show, and are highly creditable to the owner. By some mistake these oxen were not

entered on the book for fat cattle. Your committee had no power to award them a premium, but do unanimously recommend a gratuity of thirteen dollars, with thanks to Mr. Swan.

ESTABROOK MOORE, *for the Committee.*

Statement of John Page.

I bought the oxen the 3d day of May last, and used them on the farm. After finishing the spring work, they were turned to pasture. I fed them on hay and twelve quarts corn meal a day, in spring, for six weeks, and the rest of the season, or about fourteen weeks, have fed them eight quarts per day. Cost of meal seventy cents per bushel.

Statement of Joseph Cushing.

My oxen, both pair, have been worked regularly, and have had hay and four quarts of meal each, per day.

SWINE.

The committee report:

FAT HOGS.

Timothy Lincoln, 1st prem.,	8 00

BREEDING SOWS.

Franklin Nourse, 1st prem.,	8 00
T. D. Wood, 2d prem.,	4 00
A. E. Knight, four swine, gratuity,	4 00

HERBERT INGALLS, *Chairman.*

SHEEP.

The committee appointed to award premiums on sheep submit the following report:

The committee were much gratified to see such an interest manifested in this department of animals. Three great families were represented, respectively of long wool, fine wool and medium. The first under the name of Cotswool, is one of the oldest of the established breeds. They were originally heavy, coarse animals,

with thick, heavy fleece, well adapted to the bleak, uninclosed Cotswool hills. They are now very hardy, and will succeed well in almost every situation, and produce a great amount of wool and mutton at an early age.

The second bearing the name of Merinos stood as fair types of the fine wool, and were handsome portraits of this variety.

The third, South Down. The peculiarity of this sheep is its superior quality of wool. Average weight from thirteen to fifteen months, is 126 pounds; weight of fleece six pounds. The ewes are capital breeders, and generally produce one-third twins. They are best adapted to elevated situations and bare pasturage. Many differ as to the most profitable breed to the farmer, some advocate a mutton breed, others say the coarse wool. The most profitable of all varieties of domestic animals, the flesh of sheep is least used except in cities, in proportion to the quantity that is or rather might be profitably used. For this purpose we consider the South Down variety, the very best.

FLOCK OF SHEEP.

Daniel North, 1st prem.,	10 00
James H. Laws, 2d prem.,	5 00

BUCKS.

N. P. Reed, 1st prem.,	5 00
J. G. Woodward, 2d prem.,	3 00

COSSETS.

N. P. Reed, 1st prem.,	2 00
L. Kinsman, 2d prem.,	1 00

LAMBS.

James H. Laws, 1st prem.,	4 00
L. Kinsman, 2d prem.,	2 00

J. P. HAZEN, *Chairman.*

Statement of James H. Laws.

I offer for premium, one flock of sheep. Breed, native mixed. Their ages are, three two years, two three years, one seven years.

They dropped their lambs from April 10th to May 6th. They raised ten lambs. Sheared June 4th, thirty-six and three-fourths pounds, an average of six and one-eighth pounds.

I also offer one flock of lambs. Breed, native mixed. Age, five months.

POULTRY.

Your Committee on Poultry make the following report:

That the show of poultry this year was large; the offerings were more numerous than at any former exhibition.

Most all kinds of domestic poultry were well represented, thus showing an increased interest that the farmers and amateurs are taking, in this important department of industry. The cases were many where it was nice to distinguish the merits of the offerings of the competitors. In many cases we had to resort to the standard work of the Poultry Association, to determine which lot came nearest in marks and form to the accepted standard.

And then, it is possible to err in our decision; for fowls, as well as beasts, by domestication sometimes take on marks and forms different from their ancestral types, and like Jacob and Laban's cattle of old, switch off without a deterioration in purity of blood. We found the hens were in good order, for several eggs were laid in their coops, and eggs from well kept hens, are as much better as is beef from well fattened cattle. And eggs are being used as an article of food more freely since the high price of meats has become fashionable. One dozen of eggs is worth as much for food and is as nutritious as the best pound and a half of meat that is sold in the shambles.

In order to obtain the greatest quantity of eggs, fowls should have the various kinds of grain, Indian corn, (being the principal,) wheat, barley, oats and buckwheat. It seems that they have not changed their natures since the days of Æsop, the Fabulist, for now, as then, "they would rather have one grain of hordeum (barley) than all jewels." And old chanticleer frequently crows three times before those persons, who do not press their couch when the "curfew tolls the knell of parting day," are willing to leave it, but substitute artificial light for the blessed light of old Phœbus.

Whether farmers can afford to keep fancy fowls instead of those that lay the most eggs and produce the most flesh, is a desideratum.

We award the following premiums and gratuities:

PAIRS OF OLD GEESE AND GOSLINGS.

T. D. Wood, 1st premium, $3 00

FLOCKS OF GEESE.

L. H. Butterfield, 2d prem.,	2 00

WILD GEESE.

L. Kinsman, gratuity,	2 00

DUCKS.

L. Kinsman, 1st prem.,	3 00
Lyman Nichols, 2d prem.,	2 00
" " gratuity,	1 00

TURKEYS.

Lyman Nichols, 1st prem.,	3 00
W. H. Shattuck, 2d prem.,	2 00

GUINEA FOWLS.

Lyman Nichols, 1st prem.,	2 00
" " 2d prem.,	1 00

BRAHMAS.

R. F. Adams, 1st prem.,	2 00
Henry Grimes, 2d prem.,	1 00
" " 2d prem.,	1 00
J. A. Marshall, 2d prem.,	1 00
Geo. T. Younglove, gratuity,	2 00
Aaron P. Whitney, "	2 00
Lyman Nichols, "	1 00
J. A. Marshall, "	1 00
G. F. Williams, "	1 00
" "	1 00

BUFF COCHINS.

E. Moore, 1st prem.,	2 00
Eddie and Annie S. Harris, 2d prem.,	1 00
Henry Grimes, gratuity,	1 00

WHITE COCHINS.

G. F. Williams, 1st prem.,	2 00

PARTRIDGE COCHINS.

G. F. Williams, 1st prem.,	2 00
" " 2d prem.,	1 00

WHITE POLANDS.

G. F. Williams, 1st prem.,	2 00

BLACK POLANDS.

Henry Grimes, 1st prem.,	$2 00

HOUDANS.

Mrs. J. H. Lockey, 1st prem.,	2 00
Thomas Lesure, 2d prem.,	1 00

SICILIAN FOWLS.

Henry Grimes, 1st prem.,	2 00

GOLDEN PENCILLED HAMBURGS.

Henry Grimes, 1st prem.,	2 00

SILVER PENCILLED HAMBURGS.

J. F. Brown, 1st prem.,	2 00

WHITE LEGHORNS.

Jabez Fisher, 1st prem.,	2 00
J. A. Marshall, 2d prem.,	1 00
Henry Grimes, gratuity,	1 00

BLACK SPANISH.

J. A. Marshall, 1st prem.,	2 00

CYRUS KILBURN, *for the Committee.*

TOWN TEAMS.

The committee award:

Fitchburg, 1st prem.,	30 00
Leominster, 2d prem.,	20 00

E. M. STONE, *Chairman.*

FOOT RACE.

The committee award:

FIRST DAY.

Stephen W. Davis, who came in 2 31½, 1st prem.,	5 00
C. E. Farnum, 2d prem.,	3 00
Charles Blodgett, 3d prem.,	2 00

SECOND DAY.

C. E. Farnum, 1st prem.,	5 00
P. Houlihan, 2d prem.,	3 00
A. Lawrence, 3d prem.,	2 00

WHEELBARROW RACE.

Owen Flaherty, 1st prem.,	$2 00
Charles E. Titus, 2d prem.,	1 00

POTATO RACE.

R. Goodhall, 1st prem.,	5 00
O. Flaherty, 2d prem.,	3 00
F. O'Hara, 3d prem.,	2 00

SACK RACE.

C. D. Farnum, 1st prem.,	4 00
H. Goodrich, 2d prem.,	2 00

S. J. M. Weston, *for Committee.*

GENTLEMEN'S DRIVING HORSES.

The Committee submit the following report:

Henry G. Morse, 1st prem.,	6 00
J. H. Marshall, 2d prem.,	4 00
Chas. Wheelwright, 3d prem.,	3 00
Geo. E. Goodrich, 4th prem.,	2 00

Ohio Whitney, *Chairman.*

MATCHED DRIVING HORSES.

The Committee award premiums as follows:

A. Battles, 1st prem.,	6 00
L. B. Willard, 2d prem.,	4 00
James Gale, 3d prem.,	3 00
Thomas Palmer, 4th prem.,	2 00

We had two pairs only for exhibition; one pair by Wm. Gilchrist, of which your committee wish to make favorable mention; also one pair by Rodney Wallace, Esq., and your committee regret that they could not class them among the premium list. We consider them worthy; and the skilful manner in which the owner handled them, equalled if not excelled the others of the turf.

J. F. Brown, *for the Committee.*

FAMILY HORSES.

Your committee award:

J. H. Marshall, 1st prem.,	$6 00
J. H. Brown, 2d prem.,	4 00
W. W. Shattuck, 3d prem.,	3 00
Geo. F. Williams, 4th prem.,	2 00

WM. WOODBURY, *Chairman.*

STALLIONS.

The committee make the following report:

Joseph Marshall, 1st prem.,	10 00
Joseph Cushing, 2d prem.,	5 00

Lyman Patch entered his bay colt, Doctor Weston, four years old. He was a splendid horse. We were unable to award any premium, the conditions of entry not being complied with.

FRANCIS BUTTRICK, *Chairman.*

COLTS.

Your committee submit the following report:

STALLIONS TWO YEARS OLD.

James Hannegan, 1st prem.,	10 00

GELDINGS THREE YEARS OLD.

Joseph Cushing, 1st prem.,	10 00

GELDINGS ONE YEAR OLD.

Joseph Cushing, 2d prem.,	3 00

FILLIES.

THREE YEARS OLD.

Lyman Patch, 1st prem.,	10 00
J. H. Marshall, 2d prem.,	5 00

TWO YEARS OLD.

J. H. Marshall, 1st prem.,	6 00
M. S. Heath, 2d prem.,	3 00

ONE YEAR OLD.

Joseph Marshall, 1st prem.,	5 00
L. Kinsman, 2d prem.,	3 00

WARREN SIMONDS, *for Committee.*

MARES AND SUCKING COLTS.

The committee have awarded the following premiums:

Joseph Marshall, for mare, 1st prem.,	$8 00
Joseph Cushing, for colt, 1st prem.,	4 00
Joseph Marshall, for colt, 3d prem.,	3 00

H. H. Brown, *for Committee.*

DRAUGHT HORSES.

The committee make the following report:

PAIRS.

D. F. McIntire & Co., 1st prem.,	6 00
E. A. Goodrich, 2d prem.,	4 00

SINGLE.

Joel Page, 1st prem.,	5 00
Geo. L. Rice, 2d prem.,	3 00

Rodney Wallace, *for the Committee.*

PLOWING—SINGLE TEAMS.

The committee make the following report:

W. W. Shattuck, 1st prem.,	10 00
Joseph Cushing, 2d prem.,	7 00
N. B. Reed, 3d prem.,	5 00

Edward Bacon, *for Committee.*

PLOWING—HORSE TEAMS.

Your committee report as follows:

Joel Page, 1st prem.,	10 00
J. Cushing, 2d prem.,	7 00
Geo. L. Rice, 3d prem.,	5 00

D. C. Miles, *Chairman.*

CHAISE HORSES.

Your committee make the following report:

Geo. E. Goodrich, 1st prem.,	15 00
J. Cushing, 2d prem.,	6 00
S. E. Crocker, 3d prem.,	4 00

L. Patch, *for the Committee.*

GRAIN.

The committee on grain submit the following report:

CORN.

Jos. Goodrich, (Lunenburg), 1st prem., $10 00

WHEAT.

Alden Derby, (Leominster), 1st prem., 10 00
George Billings, (Lunenburg), 2d prem., 8 00

STILLMAN STONE, *for the Committee.*

Statement of Joseph Goodrich.

CORN.

Crops of 1871 and 1872, grass. Soil clayey loam; plowed once in the last of April, from eight to ten inches deep; eight cords of manure spread and harrowed; 150 pounds phosphate in hills; planted the first week in May, Carter Corn, six quarts to the acre; cultivated and hoed twice; stalks cut the first of September; three tons of stover to the acre; 6,220 pounds corn. Cost of plowing $10.00; manure $40.00; seed and planting $5.00; cultivating $9.00; harvesting $8.00.

Statement of Alden Derby.

WINTER WHEAT.

The crop raised on the land in 1871, was grass; in 1872 early potatoes; the soil is a sandy loam. I plowed once, seven inches deep; no manure; sowed broadcast, with Cahoon's Sower, on the 5th of September, two bushels of Blue Stem wheat; harrowed with Thomas' Smoothing Harrow. Cost of plowing $3.50; seed and planting $6.50; harvesting $14.00. Amount of straw 2,480 pounds; of wheat 2,000 pounds.

Statement of George Billings.

WHEAT.

Crops of 1870 and 1871, grass. The nature of the soil is clayey loam. I plowed once in September, six inches deep; twelve loads of manure spread and harrowed in; nearly a barrel of ashes sowed on after wheat was up; planted September 15th, two bushels of Blue Stem wheat; cradled in July. Cost of plowing $6.00; value of manure $20.00; seed and planting $6.00; harvesting $10.00. Amount of straw, 15 pounds to the square rod.

APPLES, PEACHES, PLUMS AND QUINCES.

The committee make the following award:

APPLES.

TWELVE VARIETIES.

C. C. Boyden, 1st prem.,	*Harris on Insects.*
J. M. Sawtell, 2d prem.,	2 00

SIX VARIETIES.

J. F. Brown, 1st prem.,	2 00
Thomas Upton, 2d prem.,	1 50

THREE VARIETIES.

D. S. Eaton, 1st prem.,	1 50
Jabez Fisher, 2d prem.,	1 00

BALDWINS.

C. C. Boyden, 1st prem.,	1 00
J. F. Brown, 2d prem.,	50

HUBBARDSTON NONESUCH.

Geo. Woods, 1st prem.,	1 00
J. F. Brown, 2d prem.,	50

RHODE ISLAND GREENINGS.

G. B. Knowlton, 1st prem.,	1 00
C. C. Boyden, 2d prem.,	50

ROXBURY RUSSETTS.

C. C. Boyden, 1st prem.,	1 00

PALMER GREENINGS.

C. C. Boyden, 1st prem.,	1 00
J. F. Brown, 2d prem.,	50

PEACHES.

J. F. Brown, best collection, 1st prem., *Harris on Insects.*

BEST DISHES.

J. M. Sawtell, 1st prem.,	$2 00
W. Wyman, 2d prem.,	1 00
E. Moore, gratuity,	1 00
Geo. T. Lincoln, gratuity,	1 00
S. Stone, "	75
S. A. Childs, "	50

PLUMS.

J. Marshall, 1st prem., 1 00

QUINCES.

J. Marshall, 1st prem.,	1 00
Lyman Nichols, 2d prem.,	50

JABEZ FISHER, *for Committee.*

PEARS AND GRAPES.

The committee award as follows:

PEARS.

TWELVE VARIETIES—12 EACH.

A. Crocker, 1st prem.,	*Harris on Insects.*
George Jewett, 2d prem.,	2 00
T. Palmer, gratuity,	1 00

SIX VARIETIES—5 EACH.

J. Fisher, 1st prem.,	2 00
Porter Piper, 2d prem.,	1 50
J. M. Sawtell, gratuity,	1 00

THREE VARIETIES—5 EACH.

H. A. Goodrich, 1st prem.,	1 50
J. M. Twitchell, 2d prem.,	1 00

BARTLETTS—12 SPECIMENS.

J. Fisher, 1st prem.,	$1 00
A. Crocker, 2d prem.,	50

SECKELS.

Z. F. Young, 1st prem.,	1 00
Walter Heywood, 2d prem.,	50

DUCHESS.

E. Graham, 1st prem.,	1 00
J. F. Brown, 2d prem.,	50

LOUISE BONNE DE JERSEY.

E. Graham, 1st prem.,	1 00
H. A. Goodrich, 2d prem.,	50

LAWRENCE.

A. Crocker, 1st prem.,	1 00
Z. F. Young, 2d prem.,	50

BEURRE D'ANJOU.

A. Crocker, 1st prem.,	1 00
G. B. Knowlton, 2d prem.,	50

SHELDON.

A. Crocker, 1st prem.,	1 00
J. M. Twitchell, 2d prem.,	50

GRAPES.

BEST DISPLAY OF NATIVES.

Geo. Jewett, 1st prem.,	5 00
A. Crocker, 2d prem.,	3 00

CONCORDS—6 CLUSTERS.

J. Fisher, 1st prem.,	1 00
T. Palmer, 2d prem.,	50

DELAWARES—6 CLUSTERS.

J. Fisher, 1st prem.,	1 00
G. Fred P. Day, 2d prem.,	50
A. Crocker, Dyke Seedlings, gratuity,	1 00
Walter Heywood, Isabella, Emeline and Hartford Prolific, gratuity,	1 00
E. T. Miles, Foreign Grapes, gratuity,	2 00
J. Waterhouse, Hamburgs, gratuity,	1 00

WM. B. HOSMER, *for Committee.*

ASSORTED FRUIT AND FLOWERS.

The committee report as follows :

ASSORTED FRUIT.

S. A. Childs, 1st prem.,	$2 00

PLANTS IN POTS.

J. M. Sawtell, 1st prem.,	2 00
S. Sawyer, 2d prem.,	1 00
" 1st prem., best 3 plants in pots,	2 00
J. M. Sawtell, 2d " " " " " "	1 00

CUT FLOWERS.

J. M. Sawtell, 1st prem.,	2 00
S. Sawyer, 2d prem.,	1 00
J. M. Sawtell, 1st prem., best 5 named dahlias,	2 00
S. Sawyer, 2d prem., " " " "	1 00
J. M. Sawtell, 1st prem., " " " asters,	2 00
S. Sawyer, 2d prem., " " " "	1 00
J. M. Sawtell, 1st prem., " " " verbenas,	2 00
S. Sawyer, 2d prem., " " " "	1 00
J. M. Sawtell, 1st prem., hand bouquets,	2 00
S. Sawyer, 2d prem., " "	1 00
Nancy Snow, bouquets, gratuity,	1 50
Maria Wright, " "	1 00
Edna Howarth, " "	1 00
Freddie Cozzens, " "	50
Benj. Safford, wild flowers, "	1 00
Freddie Cozzens, " "	50

S. C. WOODWARD, *for the Committee.*

VEGETABLES.

The committee award :

BEST COLLECTION.

E. F. Wilder, 1st prem.,	7 00
Lyman Nichols, 2d prem.,	5 00

POTATOES.

E. S. Burnap, 1st prem.,	2 00
Alden Derby, 2d prem.,	1 00

HUBBARD SQUASHES.

Stillman Stone, 1st prem.,	$1 00

CROOK-NECK SQUASHES.

Benj. Derby, 1st prem.,	1 00
J. Haskell, 2d prem.,	50

ONIONS.

Benj. Derby, 1st prem.,	75
S. Sawyer, 2d prem.,	50

TURNIP BEETS.

J. Haskell, 1st prem.,	75
Franklin Nourse, 2d prem.,	50

ENGLISH TURNIPS.

Benj. Safford, 1st prem.,	50
J. Haskell, 2d prem.,	25

TOMATOES.

S. Sawyer, 1st prem.,	50
Calvin Whitney, 2d prem.,	25

LIMA BEANS.

G. Fred P. Day, 1st prem.,	50
S. Sawyer, 2d prem.,	25

SEED CORN IN TRACES.

Benj. Safford, 1st prem.,	1 00
Franklin Nourse, 2d prem.,	75

Chas. S. Wheelwright, collection of vegetables,	gratuity,	1 00
A. Crocker, cauliflowers,	"	50
Calvin Whitney, seedling potatoes,	"	50
Chas. W. Boutelle, kale and cabbages,	"	50
Cyrus Kilburn, cantelopes,	"	50
A. S. Jefts, potatoes,	"	50
Samuel Burnap, potatoes,	"	50
Benj. Derby, mangel-wurzels, potatoes and corn,	"	50
Thos. Upton, onions and beets,	"	50
G. Fred P. Day, beans,	"	50
D. S. Eaton, ruta-bagas and mangel-wurzels,	"	50

J. H. FAIRBANKS, *Chairman.*

ROOT CROPS AND CABBAGES.

Your committee on root crops and cabbages would report only one entry, viz.:

A field of cabbages, by Ephraim Graham, of Lunenburg; one square rod of which weighed 244 pounds, or nearly twenty tons per acre.

We award to Mr. Graham the first premium of $2.00.

WM. BAKER, *for the Committee.*

GARDENS.

There were originally three entries for the premiums on kitchen gardens. One of them being withdrawn, two only competed, those of Alvah Crocker of Fitchburg, and Ebenezer Bird of Leominster. Mr. Crocker having been awarded the second premium in 1872, could only obtain the first, subsequently.

After examination and consultation, we award to

Alvah Crocker, (Fitchburg,) 1st prem.,	$12 00
Ebenezer Bird, (Leominster,) 2d prem.,	8 00

We have been led to ask ourselves the question, does the Agricultural Society or the Commonwealth obtain a reasonable equivalent for the money expended in this particular direction? The competitor may have the best laid out and best managed garden possible, and receive therefor the highest premium; but who, in reality, is the gainer thereby? He of course gains the money award; but who gets the benefit? The members of the committee may acquire information or instruction during the time spent in examination; but this is of no consequence to any except themselves, unless they can transmit it in some way to the public, by means of a published report or otherwise.

This is not easy, and in many cases it is impossible to do. If the garden could be exhibited like any other product, where every interested person could realize the benefit of whatever was new or valuable in its arrangement or management, then it is evident that there would be an equivalent for the money expended. As this cannot be done, we are of the opinion that it is not especially for the interest of the Society to offer premiums for this class of objects.

Anything that adds to the attractiveness or instructive character of the annual exhibition, or to the permanent value of the printed transactions in any way, may be considered legitimate objects of encouragement; but outside of these, we believe the bounty of the State or the funds of the Society to be of doubtful utility.

JABEZ FISHER, *Chairman.*

FARMS.

The committee would report that there was but one entry under this head, that of Ephraim Graham, of Lunenburg,—that while this farm is worthy of commendation in many respects, they do not deem it deserving a premium.

C. C. BOYDEN AND O. WHITNEY, *for Committee.*

BREAD, BUTTER, CHEESE, PICKLES, &C.

There was a good number of specimens of bread on exhibition, consisting of brown, white and unbolted wheat, made by both married and unmarried ladies, for whom separate premiums were required. Your committee were of the opinion that the quality of most of it was not up to so high a standard as we could wish, and some not worthy the premiums awarded. One or two tasted of soda, others sour; some of the brown bread was not sufficiently cooked through. All this is to be regretted, as upon the excellency of bread, depends so much of health and happiness. We will here state that a loaf of white bread intended for premium was misplaced, and not seen by the committee until too late for premium; we will therefore, award it an "honorable mention," as it well deserved.

Bread-making is a subject of so great importance, that much time, thought and money have been expended upon it by chemists of their own accord, and under the support of governments.

The investigations and experiments for avoiding failures, and

securing the best results, have been numerous, and yet the processes involved are so complex, that they in all their searchings, have not been able to note the changes that take place, with certainty. The quality in bread termed lightness, is due to the liberation of gas throughout the dough, causing it to be puffed up into a porous, spongy mass; to accomplish which purpose, there are three methods in common practice, namely: 1st, by fermentation, 2d, by the introduction of substances into the flour, such as taking powders, 3d, by using water in which carbonic acid gas is dissolved, and held by pressure, producing what is called, aerated bread. The first is more generally used. There is a simpler form termed unleavened bread, which is preferred by many, who consider it most wholesome. No domestic art requires more judgment and discretion, than making good bread; for there is no such thing as prescribing an infallible rule, success depending upon at least four variable elements; these are the quality of the flour, the strength of the yeast, moisture, and heat; but like all industries it must be learned by practice. And we would here urge the importance of more skill and care in this branch of housewifery, outweighing as it does every other domestic merit; and of keeping our tables constantly supplied with good wholesome bread, which is indeed "the staff of life."

Bread made of wheaten meal, is more perfectly adapted to our needs than any of the cereal grains; and it is a remarkable fact that those countries that produce the finest races of men, are also, abundant producers of wheat.

Bread should not be eaten until a day or two old, for when fresh, the mastication of it reduces it to a tenacious, gummy mass, which is with difficulty dissolved by the gastric fluids.

Thorough kneading is necessary, by acting on the texture of the dough, rendering it fibrous and delicate.

BUTTER.

There was about the usual number of specimens of butter before the committee, most'y of excellent quality. From three boxes of lumb butter it was difficult to decide which was best, all looking so inviting, the odor so fragrant, the taste so sweet. We found two specimens too small in quantity, by the rules of the society, to compete for premiums, one of which being of excellent quality, together with the unsuccessful competitors, we award an honorable mention.

The art of making good butter has long been known in all civilized countries; and yet a far greater amount of poor butter is thrown upon the market than of good; and strange too, when the latter will bring so much more in price and always find a ready market.

Like bread-making, there are certain conditions necessary to the highest success in butter-making; and we find in some dairies that they rarely or never fail; because, knowing the conditions, they comply with them, at whatever cost, and always find a ready sale at the highest prices.

Methods in butter-making vary, and we find butter is made in many different ways; yet there are certain principles which rule in all, and there is really less difference than appears. In all cases, milk should be kept in a perfectly clean, well ventilated room, kept expressly for dairy purposes, and away from all disagreeable odors; as nothing will receive a taint more readily than milk or cream, which will concentrate in the butter, not running off in the buttermilk as some have thought. A proper temperature is requisite; about 60° is the best. The depth at which milk is set varies; but shallow pans are usually preferred, to shorten the passage of the fat globules to the surface, before the milk begins to thicken, in which case many of them would be retained in the coagulated milk. To secure the best flavored butter, the cream must be removed and churned while the milk is still sweet, although sour cream yields butter more readily, will keep longer, and is more compact.

Much judgment is required in the working of butter; not by indiscriminate stirring, and mashings, but with careful, yet telling pressure; it being composed of minute globules, they are crushed by careless handling, and overworking, rendering the mass greasy, and sticky, instead of granular.

Coloring butter has a tendency to destroy that sweet, peculiar flavor, so palatable to butter-eaters of fine, susceptible tastes. This peculiar flavor is derived from the sweet, nutritious grasses, eaten by the cows; and here rests one secret of making good butter, that is the quality of the food consumed by the cows. It is a point too much overlooked, as the finest flavor cannot be produced upon noxious weeds, rank grasses and vegetables, or distilled slops. In this respect our soil surpasses the West, the grass upon our

hills and valleys being better than the coarse and more luxuriant grass of the plains. Pure water is another important element, which can no where be found in greater perfection, than from the numerous springs that gush from our hillsides; and this too has a decided advantage over the water in the sluggish creeks, and hard water wells of the West.

In short, after producing the milk; first, get all the cream; second, have it in good condition for churning; third, remove all the butter-milk from the butter; fourth, preserve the original good flavor, which if intended to keep, must be done by proper packing. And if you would reap a rich reward for your pains, attend carefully to the minutest details, and *never* make any but *good butter.*

There were four cheeses, all by one contributor. There is much difference of opinion as to what a good cheese should be in all respects. Like bread and butter-making, it is a science, and requires skill and experience.

There was not a great variety of preserves on exhibition, and but one of pickles. There are three methods by which fruits are preserved: By expelling the air; by drying out the moisture; and by combination with sugar. By the first our canned fruits are preserved, by the last our "preserves" and jellies.

Pickles in moderate quantities, and eaten with other food, are not open to all the objections brought against them.

The following premiums are awarded:

BROWN BREAD.

MADE BY MARRIED LADIES.

Mrs. Caroline Wellington, 1st prem.,	$2 00
Mrs. G. B. Hubbard, 2d prem.,	1 00
Mrs. Geo. Billings, 3d prem.,	50

MADE BY SINGLE LADIES.

Miss Lucy Proctor, 1st prem.,	2 00

WHITE BREAD.

MADE BY MARRIED LADIES.

Mrs. A. J. Hubbard, 1st prem.,	$2 00
Mrs. Thomas Young, 2d prem.,	1 00
Mrs. Joseph Wilder, 3d prem.,	50

MADE BY SINGLE LADIES.

Miss Mary C. Wellington, 1st prem.,	2 00
Miss Lucy Proctor, 2d prem.,	1 00
Miss Ellen M. Caswell, 3d prem.,	50

UNBOLTED BREAD.

Mrs. A. J. Hubbard, 2d prem.,	1 00
Mrs. Geo. Billings, 3d prem.,	50

LUMP BUTTER.

T. S. Wood, 1st prem.,	4 00
Mrs. B. Derby, 2d prem.,	3 00
H. M. Hayward, gratuity,	3 00
Mrs. M. Johnson, "	2 00
Mrs. Stillman Stone, "	2 00
Mrs. Louisa Snow, "	1 00

JARS OF BUTTER.

Mrs. M. Johnson, 1st prem.,	3 00
Mrs. C. W. Cragin, 2d prem.,	2 00

CHEESE.

Mrs. T. D. Wood, 1st prem.,	2 00
" " " 2d prem.,	1 00

HONEY.

S. E. Brigham, 1st prem.,	2 00
John Goodrich, 2d prem.,	1 00

CANNED FRUIT.

Mrs. Stillman Stone, 1st prem.,	2 00
Mrs. E. B. Dole, 2d prem.,	1 00

PICKLES.

Mrs. Stillman Stone, 2d prem.,	50

MRS. THOMAS PALMER, *Chairman.*

Statement of T. S. Wood.

My lot of butter is made from a dairy of ten cows; use pails, instead of pans, nineteen inches deep and ten inches in diameter; set in a tank of water kept at a temperature of sixty degrees; churn the cream three times a week, at a temperature of fifty-eight in summer, sixty-two in fall and spring.

Statement of Mrs. Benjamin Derby.

I make about seventeen pounds of butter a week from three cows. Their keeping is old pasture feed with one quart of meal and a good foddering of green sweet corn fodder, twice a day. I set my milk in shallow pans and let it stand thirty-six hours at this season of the year; then I take off the cream and add a little salt at each skimming and stir it well. I churn once a week and wash the butter to free it from the buttermilk, then I salt it with Liverpool fine salt, about two ounces to a pound. I let it stand twenty-four hours then work it over and lump it, and it is ready for the market.

Statement of Mrs. Stillman Stone.

This butter I offer for premium was made from milk of four "Jamestown" cows; was set in common tin pans about thirty-six hours. Cream salted slightly to keep it sweet. Butter washed thoroughly. About one ounce salt and one tea-spoonful powdered sugar to the pound. Worked by hand into half-pound lumps.

Statement of Mrs. C. W. Cragin.

In warm weather I keep my milk, which is strained in shallow tin pans, from twenty-four to thirty-six hours, and in skimming I am *not* as careful as some about draining every drop of milk from the cream. I have sometimes been obliged to put a little milk in the churn before the butter and buttermilk would separate, when the cream has been very free from milk. As I empty each dish of cream in the cream can, I stir in a small handful of salt. I keep the cream in a cool cellar from five to seven days before churning. I work the butter thoroughly in taking it from the churn, working in the salt and a *very little* white sugar. I prefer

working it only once afterward, the next day after churning, when I put it down in the jar; but sometimes I find it necessary to work it twice in order to remove *every drop* of buttermilk. This I consider *indispensable* to good butter. The butter is put down in layers, a little salt and fine sugar sprinkled between each.

The report of my method of making June butter will answer for this September butter in every respect, except that in these cooler days I keep the milk a little longer before skimming and the cream a little longer before churning.

Statement of Mrs. T. D. Wood.

This four meal cheese is made in the following manner: Milk that is four, three and two meals old, is skimmed, then warmed, and the morning's milk added; sufficient runnet used to form the curd, then proceed as with the new milk cheese.

The process of making this new milk cheese is as follows: Skim the night's milk; warm the milk; then add the cream to the warmed milk; when well stirred put the morning's milk to it, using runnet enough to form the curd; dip off the whey and when sufficiently hard cut the curd fine; salt with the best butter salt, using a dessert spoonful to a pailful of milk. Press from thirty-six to forty-eight hours, turning three or four times while pressing, then remove to a suitable shelf, turned daily, applying butter.

AGRICULTURAL IMPLEMENTS.

The committee report:

N. B. Reed, farm wagon, 1st prem.,	$10 00
S. G. Frost, team harness, 1st prem.,	5 00
Geo. T. Lincoln, novelty milk pail and holder, gratuity,	1 00

F. A. WHITNEY, *Chairman.*

FANCY ARTICLES.

The following gratuities are awarded:

Miss Sarah A. Graham, fancy and useful articles,	$2 00
Mrs. G. Woods, fancy articles,	3 00
Miss Clara Marshall, fancy articles,	2 00
Mrs. D. H. Brocklebank, tidy,	1 00
Miss Josie L. Perkins, toilet cushion and tidy,	1 00
Miss Stella Lowe, tidy,	50
Mrs. Geo. A. Cozzens, tidy,	50
Mrs. C. L. Fox, tidy,	50
Miss C. Tottingham, embroidery,	2 00
Miss Lucy Proctor, toilet cushion,	25
Miss A. P. Whitney, cushion and mat,	50
Mrs. H. D. Butterfield, lamp mat,	1 00
Mrs. E. F. Libby, wax work,	1 00
Miss Nancy Snow, cushion and tidies,	2 00
Mrs. Geo. A. Cozzens, feather flowers,	1 50
Mrs. Geo. Smith, glass card receiver,	50
Miss Mattie Lowe, cushion,	25
S. Herbert Adams, stuffed birds,	2 00
Chas. C. Willoughby, " "	2 00
Mrs. W. A. Smith, hair work,	3 00
Miss F. Richardson, rug and mat,	1 00
Mrs. F. E. Cleaves, rug,	1 00
Mrs. T. D. Wood, tidy blanket,	25
Mrs. Martha Shattuck, star quilt,	2 00
Mrs. Jonas Corey, mat,	25
Mrs. Ann Smith, carpet,	25
Miss Abby Roby, log cabin quilt,	1 00
Miss E. F. Libby, quilt,	25
Miss A. P. Whitney, braided rug,	25
S. G. Davis, fancy jig sawing,	25

L. H. BRADFORD, *for Committee.*

FINE ARTS.

The committee report as follows:

PHOTOGRAPHS.

J. F. Kenniston, 1st prem.,	4 00

OIL PAINTINGS.

Mrs. Frank H. Allen, 1st prem.,	4 00
Miss Fannie Cleaves, 2d prem.,	2 00

WATER COLOR PAINTINGS.

Miss Emma F. Kimball, gratuity,	$2 00
Geo. A. Wilson, "	1 00

PENCIL DRAWINGS.

E. J. Cushing, 1st prem.,	2 00
Lizzie L. Lamb, 2d prem.,	1 00
Mrs. Frank H. Allen, gratuity,	50

CRAYON DRAWINGS.

Olive S. Warner, 1st prem.,	3 00
James Patten, 2d prem.,	2 00

INDIA INK SKETCHES.

Geo. A. Wilson, gratuity,	1 00

DRAFTING.

James Patten, gratuity,	2 00

ENGRAVING.

Chas. Humphreys, gratuity,	3 00

PENMANSHIP.

E. F. Knight, 1st prem.,	1 00

WORSTED WREATH.

Mrs. Ella M. Hayes, gratuity,	1 00

L. H. BRADFORD, *Chairman.*

MANUFACTURED ARTICLES.

The committee award:

Richardson Manuf'g Co., Worcester, hay tedder,	2 00
" " " " horse rake,	1 00
Buckeye Mowing Machine Co., mower,	5 00
" " " " horse rake,	2 00
Allen & Lufkin, Barre, horse rake,	3 00
S. G. Frost, buggy harness,	4 00
W. H. Allen, pair nickel plated harnesses,	4 00
Forge Village Horse Nail Co., horse nails,	2 00
S. M. Allen, adjustable sag plane,	2 00

F. W. Hudson, Leominster, apple parer,	$1 00
Wm. Rice, apple parer,	4 00
E. M. Dickinson, ladies' boots,	2 00
R. P. Stark, brackets,	2 00
W. H. Jewett & Co., Leominster, piano fortes,	5 00
S. Sawyer, callipers and dividers,	2 00
Washburn Machine Shop, Worcester, adjustable drawing stand and drawing models,	3 00
Eli Culley, hand-cut files,	2 00
W. A. Macurda & Co., perfumery,	3 00
Haskins Machine Co., button-hole attachment,	3 00
J. P. Hunter, Agt., Worcester, Sprague mower,	3 00
O. L. Hatch, " " Wood mower,	2 00
J. F. Chaffin, " Leominster, Bay State organs,	1 50
G. B. Knowlton, parlor and cook stoves,	2 00
W. E. Henry, " " " "	3 00
S. G. Otis, Agt., Worcester, Domestic sewing machine,	3 00
Mrs. M. S. West, Wilson sewing machine,	2 00
L. J. Brown, Weed F. F. sewing machine,	4 00
H. A. Spooner, Wilcox & Gibbs sewing machine,	1 00

J. H. Lockey, *for Committee.*

MACHINERY.

The Haskins Machine Co., Fitchburg, Mass., exhibited one 2 horse power steam engine, semi-portable; one 15 horse power steam engine, variable cut-off; one 15 horse power steam engine, plain; one 10 horse power vertical steam boiler; two Stetson's turbine water wheels.

This company supplied the motive power for the machinery in the hall. Their engines are made on the system of duplication of parts, and are constructed in a thorough and workmanlike manner and of the best material. These engines can be run at a high rate of speed, work smoothly and without thumping. For these we award a premium of $25 00

The 10 horse power steam boiler, is a fine specimen of boiler-making, and is of the pattern adopted by this company, all of which are tested by the Hartford Steam Boiler Inspection.
Premium for this boiler, $5 00

The turbine water wheels are of the Stetson patent. They are well made and very powerful.
Premium of $3 00

Putnam Machine Co., Fitchburg, Mass.,

One iron planer, 1st prem.,	$10 00
One engine lathe,	
One speed lathe, 2d prem.,	2 00
One planer head, prem.,	3 00
Six lathe chucks, 1st prem.,	5 00
One case machinists' tools, 1st prem.,	8 00

The work exhibited by this well known and popular company, is of its uniform, excellent and thorough character. The planer-head is a fine specimen of workmanship and finish. The case of tools contains a full set of sizes of flat drills and reamers, fluted reamers and steel mandrills fitted to "Whitworth's standard sizes." Every well-regulated shop should contain a case of these tools. The independent four-jawed chucks are fine specimens of work.

Washburn Machine Shops, connected with the Worcester County Free Institute of Industrial Sciences, Worcester, Mass., exhibit one engine lathe; two emery wheel grinders; one speed lathe.

These machines are all of the most excellent design and character, and every inhabitant of Worcester county should be proud of the production of this shop—the pioneer of its kind in this country.

The engine lathe contains all those useful and handy arrangements so well appreciated by practical machinists. For these, together with its superior workmanship, we award a
First premium of $15 00

The emery wheel grinders are constructed with an improved box which excludes the grit and dust from the bearings. The rests are adjustable to any position required.
Premium, $2 00

The speed lathe is fitted with conical steel bearings hardened. A lathe of excellent style and finish.
First premium of $3 00

Fitchburg Machine Co., Fitchburg, Mass., one compound planer; one engine lathe; one vertical drill.
Premium, $3 00

The productions of this thriving company are decidedly popular, showing as they do from time to time that the managers are constantly adding improvements to their tools.

The compound planer exhibited, appears to be complete in all its parts and handy arrangements; is well fitted and of fine style. Premium, $20 00

The engine lathe is strong, well proportioned and well constructed. Second premium, $3 00

Rollstone Machine Works, Fitchburg, Mass., one jig saw machine. One guage lathe, premium $5 00
One Wardwell's patent saw bench, premium 3 00
One matcher, premium, 2 00

The jig saw machine has a novel device for producing and maintaining a uniform strain upon the saw. The arrangements consist of a combination of levers and springs, so arranged that the increasing and diminishing tension of the springs are overcome and equalized by the application of compound levers. The action is so perfect as to admit of the using fine saws and running at great speed. Premium, $5 00

C. M. Flint, Fitchburg, Mass., one patent lever set circular saw mill. A well constructed and finely working mill. The scale and arrangements for setting, and the dogs for holding are very complete. Premium, $10 00

New England Machine Co., Fitchburg, Mass., one portable steam engine, first premium, $3 00
One Woodworth planer, premium, 3 00

Wilder & Brown, Fitchburg, Mass., one Waymoth lathe; one automatic lathe.

The automatic lathe appears to be a great improvement over the Waymoth. Its action being automatic admits of several lathes being operated by one person. Premium, $8 00

Baxter D. Whitney, Winchendon, Mass., one Whitney's patent band sawing machine.

The frame of this machine is cast in one piece, thus securing strength and firmness sufficient to hold the arbors in proper alignment. The wheels carrying the saw-blade are made concave, allowing greater compactness and avoiding the leverage of overhung pullies. The expansion and contraction of the saw is compensated by a rubber spring, so arranged as to be self-adjusting. The saw is guided and held in position by self-lubricating, adjustable wooden guides. To resist the backward thrust of the saw, revolving hardened steel disks are placed behind the wooden guides. The table is adjustable to any desired angle. The design and workmanship of this machine are excellent.

Premium, $10 00

Respectfully submitted,

J. G. Folsom,
J. Q. Wright,
A. Wilkins,
M. P. Higgins. } *Committee.*

ESSAYS.

But a single article was offered, and that, though a pleasant and a fairly written paper, they do not deem to possess positive merits, such as to make it worthy of publication in the Society's transactions, and they award no premium.

For the Committee,

Charles Mason, *Chairman.*

ANALYSIS OF PREMIUMS AND GRATUITIES AWARDED.

Amount awarded for:

Plowing,	$44 00
Town Teams,	50 00
Neat Stock,	215 00
Horses,	173 00
Sheep,	32 00
Swine,	24 00
Poultry,	62 00
Grain,	28 00
Fruits,	62 25
Flowers,	28 00
Vegetables,	30 00
Bread,	14 00
Butter,	20 00
Cheese,	3 00
Agricultural Implements,	16 00
Manufactured Articles,	73 50
Machinery,	156 00
Other Objects,	130 00
Total,	$1,160 75

The premiums and gratuities awarded to one hundred and eighty-seven persons, were distributed as follows:

Fitchburg,	$652 00	Gardner,	$10 00
Leominster,	168 50	Winchendon,	10 00
Lunenburg,	130 25	Ashburnham,	7 50
Princeton,	65 00	West Boylston,	4 00
Worcester,	40 00	Barre,	3 00
Ashby,	29 50	Royalston,	2 00
Westminster,	24 75	Keene, N. H.,	2 00
Sterling,	12 25		

These premiums and gratuities have been paid.

Geo. S. Houghton, Treasurer, in account with Worcester North Agricultural Society.

Cr.

1872.		
Dec. 5th,	paid Horace Wood, 2 days at fair, 1872,	$4 00
	J. Cushing & Co., oats,	2 60
	C. H. Smith, 2 days at fair, 1872,	4 00
	Wright, Woodward & Co., hardware,	18 60
	C. L. Fairbanks & Co., coal,	13 12
	S. M. Lovering, marshal two days,	6 00
	C. C. Boyden, mileage on swine,	3 25
	E. L. Caldwell, 2 days selling tickets,	6 00
	C. P. Dickinson, selling tickets and use of horse,	9 00
Dec. 4th,	E. & F. King & Co., acid for balloon ascension,	81 15
Dec. 16th,	Stratton & Spooner, printing, (in part 1871),	200 00
	H. G. Morse, carpenter work,	15 00
	Fitchburg Lumber Co.,	15 10
Dec. 21st,	Fitchburg Savings Bank, interest,	245 00
1873.		
Jan. 4th,	Henry Allison, 2½ days at fair,	10 00
	Kendall & Underwood, ice for balloon,	12 00
Jan. 5th,	F. G. Kinsman, work on tank,	2 75
	M. J. Morse, damage to furniture,	25 00
	L. McMaster, tending gate 2 days, 1 evening,	7 50
	A. C. Harris, jobber,	2 00
	T. C. Upton, balance for services,	1 50
	A. B. Lawrence, hardware, belting, etc.,	25 77
Jan. 7th,	John N. Turner, advertising, Ayer Public Spirit,	5 00
	W. H. Lowe, tending gate 2 days, 1 evening,	7 50
	Geo. F. Maynard, jobbing,	2 50
Feb. 20th,	Int., on note of $3,000, Miles, Fisher & Cushing,	105 00
	E. P. Monroe, superintendent of hall,	17 50
	H. J. Kimball, gas piping,	20 00
	Additional premiums,	29 00
	Postage,	13 65
July 12th,	Interest on note, (Miles, Fisher & Cushing,)	160 00
Aug. 11th,	" " " " " "	87 50
	S. E. Brigham, repairing skeleton of horse,	1 98
Aug. 13th,	T. F. & W. P. Guy, lanterns, &c.,	9 00
Aug. 25th,	Geo. S. Houghton, services Sec. and Treas.,	60 00
		$1,227 97

Dr.

1872.		
Dec. 4th,	To amount cash on hand,	$249 02
	Cash for coupons B. C. & F. R. R.,	16 45
	for coupons Vt. & Mass. R. R.,	146 65
	for coupons Cheshire R. R.,	52 50
1873.		
July 11th,	Cash for Barnum's show,	50 00
July 18th,	Dividend on Insurance Policy, Wor. Mut.,	30 00
	Cash to date on Guarantee Fund,	340 00
Aug. 25th,	" " " " " "	100 00
	Cash due Geo. S. Houghton, Treasurer,	243 35
		$1,227 97

Jabez Fisher, Treasurer, in account with the Worcester North Agricultural Society.

Cr.

1873.		
Sept. 13th,	By cash paid for envelopes,	$4 36
Sept. 16th.	for postal cards,	8 00
	for mucilage,	50
Sept. 22d,	for stamps, ink, tacks, twine, etc.,	3 07
Sept. 26th,	John Brown,	18 00
Oct. 3rd,	Express bill,	26 00
	W. S. Kershaw, jobbing,	4 50
	H. J. Kimball,	6 00
	Stephen Shepley,	30 50
	C. G. Cushing,	25 00
Sept. 23d,	Prizes in foot race,	10 00
	" " wheelbarrow race,	3 00
Sept. 24th,	" " foot race,	10 00
	" " potato race,	10 00
	" " sack race,	6 00
Oct. 20th,	P. C. Rice, selling tickets,	10 00
	Horace Wood,	5 00
Oct. 25th,	Boutelle, Horton & Co.,	75 09
	W. M. Leathe,	3 00
	J. L. & H. F. Piper,	46 50
	Lucius Aldrich,	119 84
	Thomas Palmer,	89 86
	Leominster Band,	135 00
Oct. 20th,	W. E. Clapp,	70 00
	J. F. Simonds,	6 00
	Jabez Fisher,	3 50

Oct. 20th,	By cash paid E. N. & H. M. Choate,	$68 74
	" " " "	2 54
	L. McMaster,	12 00
	A. B. Eaton,	4 25
	Andrew Jewett,	5 00
	J. A. Battles,	25 50
	Geo. Robbins & Co.,	29 75
	M. F. Plimpton,	10 00
	Dewing & Monsall,	223 25
	Whitney & Wheelock,	28 65
	C. N. Fessenden,	10 00
	W. H. & I. A. Lowe & Co.,	171 14
	Hawkins & Weston,	2 00
	H. C. Bratt,	2 50
	Joel Brothers,	16 50
	S. M. & E. B. Dole,	3 75
	A. S. Farwell,	3 00
	J. S. Woodward,	3 00
	Sentinel Printing Co.,	24 75
Oct. 25th,	Wright, Woodward & Co.,	4 92
	C. L. Fairbanks & Co.,	10 45
Nov. 1st,	S. C. Woodward,	15 00
	C. H. Benton,	6 75
	I. P. Connig,	7 00
	W. H. Lowe,	10 00
Nov. 5th,	Postal cards, stamps, etc.,	1 30
Nov. 30th,	J. M. Blanchard,	3 00
	Kendall & Underwood,	7 80
	Freight bill,	2 25
	Rollstone Machine Works,	137 20
	Envelopes, stamps, etc.,	9 38
	S. C. W. sending notices, annual meeting,	2 00
	On hand,	140 16
		$1,732 25

1873.		*Dr.*
Sept. 24th,	To horse entrance fees,	34 50
	152 dinner tickets sold Sept. 23d,	152 00
	73 " " " " 24th,	73 00
	2 memberships,	10 00
	1 " (premium awarded $2.00),	3 00
Oct. 3d,	Cash S. Shepley, guarantee fund, (1873),	10 00
	201 coupons Vt. & Mass. R. R. Co.,	70 35
Oct. 4th,	Rent of grounds, (J. Cushing, Com.,)	73 85
	Cash admission to fair 1st day,	296 50
	" " " " 2nd day,	709 05
Nov. 30th,	Cash guarantee fund,	300 00
		$1,732 25

PRESIDENTS, ORATORS AND SECRETARIES

OF THE

WORCESTER NORTH AGRICULTURAL SOCIETY.

PRESIDENTS.

1850–1.—ABEL F. ADAMS, Esq., Fitchburg.
1852–3.—Hon. IVERS PHILLIPS, Fitchburg.
1854–5.—Hon. MOSES WOOD, Fitchburg.
1856–7.—THOMAS R. BOUTELLE, M. D., Fitchburg.
1858–9.—Hon. JABEZ FISHER, Fitchburg.
1860–1.—THOMAS BILLINGS, Esq., Lunenburg.
1862–3.—LEWIS H. BRADFORD, Esq., Fitchburg.
1864–5.—Hon. OHIO WHITNEY, Jr., Ashburnham.
1866. —JOSEPH UPTON, Esq., Fitchburg,
1867. —JOSHUA T. EVERETT, Esq., Princeton.
1868. —EUGENE T. MILES, Esq., Fitchburg.
1869. —SAMUEL OSGOOD, Esq., Sterling.
1870. —WILLIAM WOODBURY, Fitchburg.
1871–2.—Hon. JOHN H. LOCKEY, Leominster.
1873. —STEPHEN SHEPLEY, Fitchburg.
1874. —DANIEL C. MILES, Westminster.

ORATORS:

1850.—Hon. CHARLES HUDSON, Lexington.
1852.—THOMAS E. PAYSON, Esq., Rowley.
1853.—Rev. HORATIO STEBBINS, Fitchburg.
1854.—Gov. EMORY WASHBURN, Worcester.
1855.—Hon. NATHANIEL P BANKS, Waltham.
1856.—CHARLES L. FLINT, Esq., Boston.
1857.—JUSTUS TOWER, Esq., Lanesborough.
1859.—Hon. GEORGE S. BOUTWELL, Groton.
1860.—Hon. GEORGE B. LORING, Salem.
1861.—Hon. A. H. BULLOCK, Worcester.
1862.—Rev. A. N. ARNOLD, D. D. Westboro.
1863.—LUTHER H. TUCKER, Esq., Albany, N. Y.
1867.—GEORGE E. TOWNE, Esq., Fitchburg.

1868.—Hon. DANIEL NEEDHAM, Groton.
1869.—Hon. WILLIAM SPRAGUE, Rhode Island.
1870.—Hon. ALVAH CROCKER, Fitchburg.
1871.—Dr. JAMES R. NICHOLS, Boston.
1872.—Rev. C. W. EMERSON, Fitchburg.

SECRETARIES:

1850-1.—NATHAN UPHAM, Fitchburg.
1852. —JOSEPH PIERCE, Fitchburg.
1853. —CHARLES W. WILDER, Fitchburg.
1854-5.—THOMAS R. BOUTELLE, Fitchburg.
1856-7.—JABEZ FISHER, Fitchburg.
1858-63.—WILLIAM G. WYMAN, Fitchburg.
1864. —LEWIS H. BRADFORD, Fitchburg.
1865-6.—ALVIN M. SAWYER, Fitchburg.
1867-9.—LEWIS H. BRADFORD, Fitchburg.
1870. —WALTER A. EAMES, Fitchburg.
1871-3.—GEORGE S. HOUGHTON, Fitchburg.
1874.— FRANKLIN G. FESSENDEN, Fitchburg.

LIFE MEMBERS.

In the following list the Post Office address, when it differs from the residence, is given in *italics* after the name; * indicates that the person has removed, but that the present residence is unknown; † indicated that the person has deceased.

ASHBY.

Brown, C. H.
Burr, John
Damon, Samuel R.
Damon, Ebenezer
Davis, John
Fay, Dennis *Fitchburg.*
Foster, Jesse
Foster, Joseph
Foster, Joel
Gates, Howard
Gates, Paul
Hapgood, Wm. G.
Hayward, Homer J.
Hayward, Joel
Hayward, Paul
Hayward, Samuel
Hayward, John
Hodgman, Luther

Hubbard, Augustus
Hubbard, George B.
Johnson, William
Kendall, George
Lawrence, David †
Smith, Levi
Spencer, Hobart
Wallis, Benjamin
Wallis, B. Frank *Fitchburg.*
Wellington, Liberty
Wright, Charles H.
Wright, Francis W.
Wilder, E. F.
Willard, L. B.

ASHBURNHAM.

Adams, Ivers
Barrell, Nahum
Cummings, John L.
Davis, John C.
Eaton, N. L.
Ellis, Daniels Jr.,
Foster, Jerome W. †
Green, Hosea
Harris, Humphrey *Burrageville.*
Houston, Horace W.
Howard, George
Howe, Addison
Howe, Perley
Marble, Warren
Maynard, Antipas
Merritt, Simeon
Russell, Ward
Russell, Franklin
Sampson, George G.
Wallace, Merrick
Wallace, F. W.
Ward, Isaac D.
Ward, Stephen
Whitmore, Alfred †
Whitney, Merrick
Whitney, Ohio
Wilker, John
Wilker, Joseph W.
Willard, Merrick
Winchester, Charles
Winchester, George C.
Woodward, John G.
Whitney, F. A.

BOSTON.

Beal, F. E. L.
Boothby, S. A.
Breck & Sons, Joseph
Comee, William W.
Farwell, Lyman
Haskins, F. W.
Lucas, Edmund G.
Proctor, D. A.
Simonds, Alvan
Tilden, William P.
Whitney, Waldo F.
Whittemore, Belcher & Co.

FITCHBURG.

Aldrich, Lucius
Aldrich, Mrs. Lucius
Aldrich, Miss Mary M.
American Rattan Company,
Adams, Erastus *
Applin, Mrs. Sophia S.
Bailey, E. Foster
Baldwin, Joseph
Ball, William *
Ball, S. B. *
Barker, Lorenzo
Barker, Mrs. Lorenzo
Bascom, Silas
Battles, Oscar A.
Battles, George T.
Battles, J. Augustus
Billings, Charles J.
Blood, H. A.
Boutelle, David
Boutelle, Frank L.
Boutelle, Mrs. T. R.
Bradford, Lewis H.
Bradford, Mrs. L. H.
Bradford, Miss Anna T.
Brigham, Charles
Brigham, Seth E.
Brown, Mrs. Bessie M.
Brown, James D. *
Brown, Horace H.
Brown, L. J.

Brown, James *W. Fitchburg.*
Brown, John F. 2d.
Bullock, Laban *
Burnap, Edwin S.
Burnap, Samuel
Buttrick, Francis
Burleigh, Charles
Burney, John
Caldwell, Enoch †
Caldwell, Thomas C.
Carleton, Wm. A.
Carpenter, Daniel M. †
Caswell, Hosea M.
Caswell, Nathan
Caswell, S. Melville
Childs, S. Austin
Choate, John
Coggshall, Henry F.
Comee, Leander P.
Comee, Charles H.
Conn, John A.
Conn, Reuben R.
Colony, George D.
Corey, Jonas
Cotting, William W.
Cowdin, Natt
Crehore, Warren A.
Crocker, Alvah
Crocker, Daniel P.
Crocker, Charles T.
Cross, Daniel
Cushing, Joseph
Cushing, Mrs. Joseph
Cushing, Charles G.
Cushing, Susan E.
Cushing, Milton M.
Corey, David A.
Damon, Albert
Damon, George
Daniels, Thomas E.
Dadmun, Charles E.
Davis, Alonzo
Davis, Jonathan P.
Davis, Charles
Davis, Elnathan *Auburn.*
Davis, Joel
Day, William F.
Delahanty, Charles J.
Derby, Gilbert H.
Dickinson, Elijah M.
Dickinson, Charles P.
Dole, A. S.
Dole, S. M.
Downe, Mrs. Leonard
Downe, Edward P.
Downe, Mrs. Edward P.
Drew, Wm. B. S. *West F.*
Dyer, Henry B.
Dyke, Joseph
Eager, Wm. L.
Eames, Walter A.
Eaton, Daniel S.
Eaton, Thomas S.
Eddy, B. Webster
Emerson, Alfred *Lancaster.*
Emory, Charles A.
Emory, William C.
Emory, Edward F.
Emory, Sidney P.
Fairbanks, Charles L.
Fairbanks, Lyman N.
Fairbanks, J. H.
Farrar, Gardner
Farwell, Elijah C.
Farwell, Samuel *
Farnsworth, Thomas
Fay, George F.
Fessenden, Charles
Fessenden, Fr. G.
Fisher, Jabez
Fisher, Mrs. Jabez
Fisher, J. Frank
Fitchburg, Town of
Freeland, James C. †
Frost, S. Gilman
Frye, George A.
Fuller, Hubbard B.
Fitchburg Novelty Works,
Garfield, J. F. D.
Garfield, John
Gerry, E. J. *
Gill, Thomas H. *
Gilbert, Ivar R.
Gibson, Thomas †
Goodrich, Edwin A.
Goodrich, Henry A.

Goodridge, Alonzo P.
Goodrich, George E.
Goodridge, Herbert D.
Goddard, R. L. *Palmer.*
Goodwin, William H. *West F.*
Gould, William
Gott, Calvin O.
Graves, Howard M. *
Greene, Henry G.
Hadley, Nathan B.
Hale, Samuel
Hannegan, James
Hardy, William A.
Hardon, J. J.
Harris, Gordis D. *
Harris, John M.
Hartwell, Isaac
Haskell, Jacob
Haskell, Miss Lizzie H.
Haskins Machine Co.
Haskins, John F.
Haynes, Stillman
Hayward, E. T.
Hawes, Samuel †
Hawkins, Gardner P.
Henry, Wm. E. & Co.
Heywood, Walter
Heywood, Mrs. Walter
Hitchcock, Alfred
Hitchcock, Hiland C.
Hogan, Walter W.
Hodges, George L. *
Holmes, Elias
Holman, Silas
Holden, Marquis L.
Hollis, John W. *
Holton, S. S.
Hosmer, Silas
Hosmer, Mrs. Silas
Hosmer, Miss Clara D.
Houghton, Josiah S.
Houghton, Edward L.
Houghton, George S.
Houghton, Mrs. George S.
Jackson, Henry
Jaquith, Caleb W.
Jewett, George
Jefts, Asa S.
Joel, Reuben
Kenney, William F. *
Kendall, Levi
Kimball, John W.
Kimball, A. P.
Kimball, Herbert W. *
Kimball, H. J.
Kilgore, John C.
Lawrence, Abram G.
Lawrence, George L.
Lane, Mrs. J. B.
Lewis, Mrs. B. F.
Leathe, William M.
Leverett, James W. *
Litch, Aaron K.
Litchfield, James D.
Livermore, Charles *
Lowe, Henry J. *
Lowe, John
Lowe, Willard H.
Lyon, Moses G.
Macy, E. B.
Manning, Elson W.
Manning, Joseph E.
Macurda, W. A. & Co.
Marshall, Alfred A.
Marshall, Abel
Marshall, Jonas A.
Marshall, Joseph A. *
Mason, Charles
Mason, Caroline
McIntire, David
McIntire, Farrington
McIntire, James
Merriam, David H.
Messenger, Daniel
Messenger, Horace P.
Miller, Alfred
Miles, Eugene T.
Miles, Mrs. E. T.
Miles, Miss Hattie E.
Miles, Miss Anstis R.
Miles, Miss Mabel A.
Monroe, Edwin P.
Monroe, Mrs. E. P.
Monroe, James F.
Montjoy, George W.
Moulton, J. C.

Murnane, William
Morse, H G.
Morse, M. J.
Morse, Herbert O.
Nichols, Lyman
Norcross, Amasa
Nutting, George F.
Page, Hale W. *Kalamazoo, Mich.*
Page, Joel
Page, Mrs. Joel
Page, Herbert E.
Page, Walter F. *
Page, Warren B. *
Palmer, Thomas,
Palmer, Mrs. Thomas
Palmer, Miss Mary
Palmer, Joseph
Partridge, H. P. †
Partridge, Asa
Patch, Lyman
Patch, Mrs. Lyman
Patch, Arthur
Phelps, S. Dennis
Pierce, James
Pierce, Joseph
Pierce, Joseph 2d
Piper, Joseph L.
Piper, Henry F.
Place, J. D.
Porter, E. C.
Pratt, Lawrin
Pratt, Silas
Pratt, Willie F. C.
Prichard, John
Pride, William M.
Proctor, George B.
Proctor, George N.
Proctor, Sullivan G.
Proctor, Benjamin F.
Proctor, John B.
Proctor, Mrs. J. B.
Putnam, James P.
Putnam, Frank P.
Putnam, Salmon W. †
Rice, Oran S.
Richardson, Edwin
Richardson, J. B *
Ripley, Flora B.
Robbins, George
Ruggles, Otis T.
Ruggles, Mrs. Otis T.
Ruggles, Miss Abbie J.
Ruggles, Walter W.
Sabin, John P.
Safford, Benjamin
Sawtell, Charles
Sawtell, John M.
Sawyer, Sylvanus
Sawyer, Alvin M.
Sawyer, Asa †
Sawyer, Charles B. *West F.*
Sawyer, Charles K. *West F.*
Saunders, Charles *
Shattuck, Warren W.
Sheldon, Francis
Sheldon, Thomas
Sheldon, Samuel D.
Shepley, Stephen
Shepley, Mrs. Stephen
Shepley, Francis B.
Sherman, Andrew B.
Simonds, Abel *West F.*
Simonds, Joseph F.
Smith, Edward
Smith, John
Smith, Joseph
Smith, William P.
Snow, Peter S.
Snow, C. H. B.
Snow, Benjamin
Snow, Francis H. *
Society, First Universalist
Spaulding, E. G.
Sprague, Leander
Stearns, Varus *
Stickney, George O.
Stiles, James F.
Stiles, Mrs. J. F.
Stoddard, Charles B.
Stockwell, Loriston †
Stone, Norman
Stone, Alanson J. *Lancaster.*
Stevens, Levi *
Stratton, Charles C.
Tenney, Jonathan L.
Thurston, Cyrus

Torrey, Ebenezer
Torrey, Mrs. E.
Towne, George E.
Trees, Thomas †
Tuttle, Lewis G.
Tuttle, D. Waterman
Twichell, John M.
Twichell, Seth
Upham, Nathan
Upton, Harrison
Upton, John
Upton, Mrs. J.
Upton, Edwin
Upton, Thomas
Upton, Warren C.
Vose, William H.
Wallace, Rodney
Ware, Samuel
Ware, T. K.
Ware, Lewis
Warren, L. W. †
Waterhouse, Joseph *
Waymouth, A. D.
West, Benjamin W.
West, Clark S.
Weston, S. J. M.
Wetherbee, Alfred
Wheelock, George
Wheeler, Benjamin
Wheeler, Loring
Wheeler, Lorenzo D.
Wheeler, Samuel A.
Wheelwright, Geo. W. Jr. *
Whitcomb, Nathan
White, W. Fred *
Whitman, Jonathan
Whitman, Augustus *Leominster.*
Whitman, Ephraim
Whitney, Edwin A.
Whitney, Albert E.
Whittemore, Mrs. B. F. *
Wilder, Charles W. *
Willis, Henry A.
Wilkins, Aaron
Wilson, Timothy S.
Wood, Charles H.
Wood, Mrs. Moses
Wood, Nathaniel
Woodbury, James M.
Woodbury, Miss Maria E.
Woodbury, William
Woodbury, Oscar F.
Works, T. Benton
Works, Edwin D.
Works, George F. *
Wright, J. Q.
Wheeler, John
White, Ivers
Young, Z. F.
Younglove, T.

GARDNER.

Bancroft, Amasa
Bush, C. W.
Greenwood, Calvin S. †
Heywood, Levi
Heywood, Seth
Heywood, Charles
Hill, Edwin
Hill, Henry C.
Hill, John W.
Hubbard, George W. *
Parker, David
Sawin, John *So. Gardner.*
Stevens, S. W. A. *So. Gardner.*
Taylor, Stephen *So. Gardner.*
Wood, Abel S.
Wood, Asaph *So. Gardner.*

HARVARD.

Bull, Trumbull
Burt, George E.
Farmer, Emroy
Fletcher, Sherman
Hosmer, Samuel
Lane, Edwin
Puffer, Josiah *Ayer.*
Taylor, Zopher
Whitney, Hiram
Whitney, Samuel F.
Willard, Alfred R.

LEOMINSTER.

Allen, Joel C.

Arlington Piano Company,
Boutelle, N. C.
Boyden, Elliot E.
Boyden, Charles C.
Bennett, James
Bird, Ebenezer
Burrage, Emory
Burrage, Leonard *North L.*
Burditt, A. L.
Burditt, J. S. †
Buss, John L.
Carter, James H.
Carter, Solon
Carter, George R.
Chase, Henry
Cozzens, Joseph
Colburn, Charles H.
Cotton, Ward M.
Day, N. C. *
Derby, Alden
Derby, Cephas
Everett, Abram
Field, C. C.
Fuller, William H.
Gates, Augustus
Gates, Edwin
Gates, Whiting
Gates, Jonas W.
Grout, George H.
Harrington, Fred B.
Haskell, Franklin L.
Haws, Manson D.
Hosmer, William B.
Hall, B. F.
Johnson, Ephraim
Johnson, Elbridge
Joslin, Charles L.
Keteridge, Monroe H.
Lincoln, Geo. T.
Lincoln, Timothy
Lockey, John H.
Lockey, John M.
Lyon, A. E.
Marshall, James A.
Marshall, James H.
Marshall, Joseph *North L.*
Merriam, C. H.
Merriam, Gardner
Morse, Augustus *
Moore, Estabrook
Nichols, Edmund H.
Nichols, John F.
Nicholson, Charles R.
Piper, Porter
Putnam & Phelps *North L.*
Rice, George L.
Stratton, Albert
Salisbury, D. W.
Sheldon, G. W.
Snow, Mrs. Nancy *North L.*
Thompson, E. P.
Tilton, Emory
Tisdale, S. A.
Whitney, F. A. Carriage Co.
Woods, George
Woods, Henry A.

LUNENBURG.

Baker, William *Fitchburg.*
Ball, Varnum
Billings, Thomas
Billings, George
Brown, W. L.
Brown, John F.
Brown, Mrs. J. F.
Fairbanks, John
Graham, Ephraim *Fitchburg.*
Goodrich, Joseph
Gilchrist, George S.
Heath, Mahon S.
Houghton, Edmund
Johnson, Martin
Kilburn, Cyrus
Kilburn, Mrs. Cyrus
Page, Luther
Pitts, Lemuel *
Putnam, James
Putnam, Daniel
Stone, Stillman
Whitney, Aaron P.
White, Levi

PRINCETON.

Benson, W. W.

Beaman, Winslow E. *East P.*
Brooks, John
Brown, W. H. *East P.*
Danforth, Nathan *
Everett, J. T. *East P.*
Gill, Emery W.
Gregory, George M.
Hastings, Solon S.
Houghton, George W.
Merriam, J. Edwin
Mirick, Sewall G.
Mirick, Moses H. *East P.*
Mirick, Paul M. *East P.*
Reed, Nathan B.
Richardson, Sewall
Roper, John
Roper, Wilkes
Skinner, George O.
Skinner, Harlow
Thompson, A. G.
Temple, Jonas H. *East P.*
Whitcomb, Joseph *East P.*
Wilder, Mark *East P.*

ROYALSTON.

Bemis, Otis *South R.*
Clark, Edson
Clark, Timothy
Farrar, S. S. *South R.*
Hale, John W. *South R.*
Hale, Silas *South R.*
Jones, Aaron *South R.*
Jones, Silas *South R.*
Perkins, Joseph L.
Raymond, Joseph
Safford, Roby R. *South R.*
Stockwell, Anan *South R.*
Turner, Ephraim *South R.*

SHIRLEY.

Davis, George
Edgarton, Charles A. *S. Vill.*
Gardner, Jerome B. *S. Vill.*
Gardner, M. T. *S. Vill.*
Hartwell, Nathaniel
Hazen, Thomas L. *S. Vill.*
Hazen, Jacob P. *S. Village.*
Munson, Norman C. "
Page, George "
Parker, James O. "
Sanderson, George W. "
Wetherbee, Wm. H. "
Whitney, Thomas E.

STERLING.

Barron, A. S.
Baldwin, William
Burpee, Edward
Fitch, Charles B.
Flagg, Charles
Hastings, Rufus
Heywood, H. Marcellus
Heywood, Moses B.
Kendall, Ezra
Kendall, George
Loring, Chandler H.
Loring, Maynard
Nourse, Franklin
Osgood, Samuel
Peck, W. D.
Richardson, William B.
Stephenson, John M.
Sawyer, Jonathan M.
Sawyer, Putnam
Sawyer, William H.
Smith, Sidney
Whitney, Joseph

TEMPLETON.

Day, Gilman *Baldwinville.*
Goldsmith, J. G. *Otter River.*
Sawyer, Edwin *Baldwinville.*
Sawyer, James *East Templeton.*
Simonds, Warren
Smith, Levi N. *Baldwinville.*
Stone, E. W. *Otter River.*

WESTMINSTER.

Bacon, Edward
Barnes, Adonijah
Benjamin, A. W. *Wachusett Vill.*

Benson, Bigelow
Brown, Timothy *Wachusett Vill.*
Carter, Russell O.
Carter, E. R.
Chesmore, Reuben G. *Fitchburg.*
Divol, Luke
Duncan, Geo. N. *Fitchburg.*
Ellis, Preston
Flagg, Otis
Forbush, Joseph W. *
Hagar, Isaac *
Holden, Amos B.
Laws, David *Ashburnham.*
Laws, James H.
Leonard, John K.
Merriam, Artemas
Merriam, Caleb S.
Merriam, Joel †
Minot, John
Miller, Joseph *
Miles, George †
Miles, Daniel C.
Miles, Daniel *Wachusett Vill.*
North, Daniel
Page, Josiah *West F.*
Page, Porter F. *West F.*
Puffer, James,
Raymond, Asa
Raymond, Eli W.
Raymond, Aretas †
Sprague, S. H. *Wachusett Vill.*
Towne, George W. *
Waterhouse, Joseph
Whitney, Calvin
White, Marshall
Winship, Handell
Winship, Sylvester
Wood, Aaron
Wood, Benjamin F.
Wood, Timothy D.
Wood, T. S.
Wood, Allen B. *Fitchburg.*
Wyman, Benj. *Wachusett Vill.*
Wyman, Franklin *Wachusett V.*
Wyman, David *

WINCHENDON.

Brown, William 2d
Cutter, John
Folsom, John G.
Forristal, John M.
Mason, Orlando
Murdock, Ephraim Jr.
Raymond, Paul Jr.
Whitney, Giles H.
Vose, Reuben Jr.

WORCESTER.

Beaman, G. S.
Bullock, Alexander H.
Boyington, John
Brown, Alzirus
Barnard, A. B.
Chase, Anthony
Howard, Justin
Harris, Gideon
Miles, Charles M.
Phillips, Ivers
Richardson, George W.
Spooner, A. J.
Wellington, Timothy W.
Wheeler, W. A.
Whitcomb, David

MISCELLANEOUS.

Martin Clifford, Amherst; George Chandler, Acton; William S. Merritt, Ashfield; Francis Conant, Boxboro'; J. H. Reed, J. Forbush, Bolton; R. S. Denney, Clappville; William A. Mandell, Cambridge; Washington Nichols, Charlestown; Amory Davidson, Clinton; Rodney Fuller, Dracut; Eli A. Hubbard, Easthampton;

Henry G. White, Framingham; Hazen O. Bean, Groton; Charles L. Nutting, Groton; Nath'l Holden, A. L. Lawton, Groton Junc.; M. L. May, Hubbardston; Alpheus B. Davis, Holland; Ebenezer Bullard, Hampstead, N. H.; J. A. Harwood, J. H. Whitcomb, Adam Thompson, Littleton; Albert Merriam, Lowell; John W. Piper, Lynn; Samuel Farwell, 2d, Fitchburg; John F. Ware, Milton; A. O. Cummings, Israel Everett, A. C. & J. G. Wood, Millbury; Daniel W. Blood, Pepperell; Edward Powers, Phillipston; John A. Rice, Quincy; Henry B. Jones, Townsend; Asher Green, Mrs. Asher Green, Abram M. White, West Townsend; Stephen Stanton, Wayland; Martin Harris, Warwick; L. H. Rice, West Boylston; E. W. Houghton, Still River; A. H. Brick, Waterbury, Vt.; James O. Kendall, Hartford, Wis.; Luther H. Tucker, Albany, N. Y.; Henry F. Kenney, Philadelphia, Pa.; H. W. Collin, Burlington, Vt.; Joel Foskett, Camden, N. Y; Elisha Garfield,† Horatio Hill, Israel Longley, Chicago, Ill.; Milton Frost, Detroit, Mich.; J. T. Densmore, Charleston, N. H.; Nathan Whitney, Claremont, N. H.; Hiram W. Albee, Ludlow, Vt.; Artemas F. Andrews, Geo. M. Gage, North Ipswich, N. H.; Solomon P. Burpee, J. M. Stuart, William B. Wood, New York City; Gilman Jones, N. Buffalo, Mich.; Kendall Brooks, Joseph W. Mansur, Kalamazoo, Mich.; Oliver Howe, Titusville, Pa.; James L. Haynes, Peru, Vt.; Solomon F. Towne, Rindge, N. H.; Frank M. Proctor, Westmoreland, N. H.; Henry R. Phelps, Syracuse, N. Y.; Bailey, Cook & Co., Woonsocket, R. I.; William G. Wyman, Maine Prairie, Cal.; Thomas B. Choate, Stockton, Cal.; Horatio Stebbins, San Francisco, Cal.; Henry W. Haskell, Marysville, Cal.; Jacob Brown, Maysville, Mo.; James Houghton, Oakdale; Jones & Perkins, Wilton, N. H.

AGRICULTURAL COLLEGE

REPORT.

ROOT CROPS AND CABBAGES.

(The following report came too late to be printed in its order.)

"The object of every practical farmer is to grow from a given extent of land, the largest quantity of the most valuable product at the least expense; and at the same time with the least injury to the soil."

Experience ought to teach every farmer that here on our old sterile soils of Worcester North, that it is folly to think that either cereals or root crops without deep and thorough tillage, which is effected mainly by efficient plowing, can throw out strong roots, luxuriant stalks and an abundant harvest.

It is obvious too, that the little seed after breaking the shell, delicate, thread-like as it is, cannot penetrate the soil unless it be made soft and fine; neither can these small rootlets extend their researches for food unless the soil has a corresponding depth and richness to feed upon; hence thorough tillage must be resorted to, and this can not be effected unless the soil itself be in proper condition at the outset.

All vegetables in their various stages of growth require air, warmth and moisture; otherwise life and health are not supported.

Below the surface of the ground there is a body of cold, stagnant water, sometimes, however, to great depth, but frequently near the surface, and in retentive soils within a foot or so of the surface. Now this stagnant water not only excludes the air and warmth, but renders the soil wet and cold; and being of itself no benefit without air and warmth, its removal to a greater depth is desirable; hence underdraining—preliminary to deep tillage, in fact a thorough pulverization of soil can not be reached without the removal of the stagnant water below the surface.

As farm drainage is yet in its infancy in this section, (Worcester North,) questions are frequently put by young farmers, and those also of long experience: What lands require drainage? For what crops should soils be drained, and for what purpose?

To the first, it may be said that soils having comparatively a deep surface, soil impregnated with clay, and retentive of water so that willows and wild grapes make their appearance in the place of timothy and red-top, this is evidence of standing water, from the fact that these water-loving plants would not have been found there, had not the stagnant water below the surface been present and encouraged their growth.

In reply to the second inquiry it may be said that all cereals and root crops require that water should be removed from twenty to twenty-five inches below the surface, for the purpose of giving deep plowing, thus admitting air and warmth.

It has come under the observation of extensive root growers on meadow and swamp lands, that if the water stand in the ditches only six or eight inches from the surface, that the root penetrates only to that depth but refuses to go further ; here it makes half a dozen little fangs or fingers, branching off sidewise — any where rather than into its enemy—cold water; and the result is a half-starved crop.

All cereals require the very opposite of wet, cold land, but a deep, loose, friable soil, and this can not be reached, when water is at or near the surface; it has of late come to the knowledge of observing cultivators, that the small roots of cereals extend many feet, instead of only a few inches as was formerly supposed; hence when these small tender roots come in contact with any pernicious substance, their growth is retarded, the stock grows pale and sickly, consequently a meagre crop.

Stagnant water again is deadly poison to young pear trees and grape vines, therefore the young man who intends to embark in the cultivation of pears or grapes, should carefully study the nature of his soils, their texture, location, aspect, etc.; and for any or all of the above named crops, he should be satisfied with nothing short of a *deep pulverized soil*, and this can not be had when its foe is at the bottom.

Nursery-men and market-gardeners have long since learned, that having a well drained soil, either naturally or artificially, and deep cultivation, have been their stronghold to success.

It was the theory of the early teachers of agriculture, that having a soil free from water, and by giving deep and frequent plowings, it would so much enrich the soil, that successive crops might

be taken without the application of manure; so we repeat that draining our soils is a branch of improvement, and its principles little understood, and its advantages not fully appreciated, and we are not likely to learn much of either, only from experience and observation.

Having prepared the soil for tillage by under-draining, the next work of importance is effected by the use of that very useful farm implement, the plow. Although improvements within the last half century have been made in the construction, yet the advancement in its use has not been in the same ratio; neither, as a general rule, have our grass lands or other lands been so well and effectually worked by the plow as they were fifty years ago, and for the simple reason that our boys and young men have not been trained to the work; for a man "*to hold plow*" or let the plow follow the team, the plowman having his mind and eyes on some other object is *one* thing, but to guage the plow, give proper draft and cut a straight furrow, of uniform width and depth and lay the same even and level throughout the field is quite another. And not one in ten who has never been trained in the work is able to perform the task. It was truly said by an experienced farmer that it required more skill and ingenuity to govern and gauge the plow, than for the builder to make one; as the mechanic has both rule and line to work by and guide him, while the plowman has only his own eye and muscle to govern him; hence, to become a plowman the individual must not only have an interest in and a desire for the work, but he must have no small amount of practice.

One object in plowing is to make a mellow seed-bed for the plant capable of absorbing the elements from the atmosphere, essential for its growth. The absorbing portion of the soil, is in proportion to its fineness, the finer and more porous we make the soil, the greater the power of absorption. It is well known that if water adulterated with barn manure, be filtered through fine pulverized clay, it is rendered nearly pure; when drained through gravel it is less so, and if sand is used, the change is hardly perceptible. So that the finer we make the soil, in the same ratio will they retain those elements of the atmosphere necessary for plant food. Hence if we would have our soils retain the manure and fertilizers we put upon them, it is important that we make them fine and porous; although pulverizing the soil is not applying manure, yet it serves materially to aid the young rootlets in making their researches for food, and hastens the crop.

One object then in plowing, is to break the stubble, and reduce the soil to that degree of fineness that the rains, dews and air may penetrate them, and deposit their fertilizing influences.

Another object in plowing, is to mix and deepen the soils. It often happens that the surface soil is sandy and the sub-soil clay, or the surface soil composed mainly of vegetable loam, and the sub-soil wanting. Now it is important that these soils are mixed and made deeper and changed to a proper fineness, before they are fit to give sustenance to the young plant, and give more extensive range to the young rootlets. The depth to which land should be ploughed, should be varied according to circumstances. We would not, however, favor the principle of turning up a large amount of sub-soil at once, but at each successive plowing, gauge the plow so that it may remove and bring to the surface about one inch more in depth than at the previous plowing; this will add an amount of sub-soil to the surface, equal to one hundred loads of thirty bushels each, to be converted into surface soil, and this operation repeated till the required depth is obtained.

It was said, with much emphasis, nearly half a century ago, by a scientific and practical farmer, "plowing is too deep when it buries all the richer parts, and brings to the top only a cold and gravelly substance, unless you have manure in such abundance, that you can create a new vegetable surface." This principle is as true to day as then. It may also be said with equal emphasis, that plowing is too frequent when the excess of crops does not fully compensate for the extra cost of plowing.

Every observing farmer must have noticed that when imperfect plowing has been done around trees and stumps, and about fences, that the crops are poor and feeble. This is not caused by the poverty or sterility of the soil, because as the plow rises out of the ground to the surface, it brings with it, and deposits the richer parts of the soil. The feebleness of the crop is caused by the indifferent plowing, and consequently from poor tillage that the plant has received afterwards.

As before said, the rains and the atmosphere are not only charged with elements of fertility, but they are agents acting with heat in preparing food in the soil for the use of plants. Rains, heat and air should not only enter *into* but circulate *through* the soil. Stagnant water and stagnant air are alike hurtful to animals and plants.

The old cut-and-cover system of plowing, is in vogue in 1873, as well as in 1823.

We remember, when boys, the object was *quantity* and not *quality*; regarding the complete breaking up and removing of the sod, a matter of minor importance. Now, there will always be boys in the field, until the theory of good plowing is better understood.

POTATOES.

Of all crops now grown in New England, in no other form can so large an amount of human food be grown from an acre, as in edible roots or tubers; and of these the potato is by far the most acceptable. Other roots are used occasionally, by way of variety, or as giving relish to other kinds of food; but the potato alone forms a part of the every day diet to all.

SOIL AND PREPARATION.

The farmer who has a dry, warm soil, well covered with decayed or decaying leaves or brush, may expect to grow from it a good crop of potatoes, provided the seed be sound and good, and under a clean cultivation. Grown on dry, new land, the potato always cooks dry and mealy, and possesses an agreeable flavor not usually found in those grown in any other soil. In no argillaceous soil can the potato be grown to perfection, as far as regards *quality*, although it may be so as far as it respects *quantity*.

To produce roots of the best quality the soil should be dry, deep and porous, and to get a large crop the ground should be well filled with humus. Nitrogenous manures should always be excluded; if they must be used, it is far better to apply them to some other crop the year previous to growing the potato. An excellent manure for the potato is to mix one cord of well seasoned muck with one cask of air slaked lime, using salt liberally at the time of slacking and applying about eight cords to the acre. As soon as the shoots break the ground a small quantity of some good fertilizer applied renders material aid in hastening the crop. Another cheap and profitable manure has been found by using one cask of pure bone meal to the same quantity of unleached ashes thoroughly mixed together; let the heap remain upon the barn floor for a week or ten days, shoveling it over once in a day

or two ; apply this compost in the hills or drills at the rate of four or five casks per acre, using care to throw a small quantity of earth upon the seed before applying the compost. This has been found a valuable manure, costing only five-eighths as much as that of super-phosphate the best now in use, and producing quite as good results. As all fertilizers act quickly upon plants, compared with barn manure, it is plain that the whole quantity should not be applied at once or at the time of planting, but one-half at the time of depositing the seed, and the remainder at the first and second hoeings, thus keeping the crop constantly supplied with plant food during its growth.

To grow a heavy crop of potatoes at the present high price of land already denuded of its humus, together with the high prices of poor labor, it is necessary that all requisitions should be fulfilled; that is, we can't gather grapes from thorns, nor good potatoes from a dry, hungry soil without special care. We remember, when boys and living in Vermont, about sixty years ago, it was not uncommon for farmers to grow from three to four hundred bushels to the acre; now it is well known that half that amount is more than an average yield on the same ground.

This great falling off in quantity can not be attributed to running out of varieties, for varieties are yet extant that have not passed their prime, neither can it be caused by disease, for disease does not occur every year, nor does it enter every field; it may be traceable mainly to poverty in the soil in certain ingredients, or in other words the soil is partially denuded of its humus. Now it is suggested that if one will plant on comparatively dry, suitable soil enriched with leaves, sea weed, or in plowing in green crops till the soil is filled to a proper depth with vegetable matter, he will find that the potato can yet be grown in Worcester North in full vigor and usefulness. The skinning process so often alluded to by taking from the soil all that is possible to take, and returning nothing to it again is a ruinous operation to the farm, as well as to the owner.

ONIONS.

As a general rule, any soil well adapted to the growth of Indian corn, is well suited to the onion. Lands that slope in any direction, should never be selected, as great injury is liable to be done in spring-time, by washing the seed or young roots from their bed; therefore fields nearly level should be chosen; lands abound-

ing with coarse gravel are always to be avoided; reclaimed meadow, with a light coating of sand, frequently gives quite as good return in quantity as any soil that can be chosen, although the quality is sometimes inferior; lands also abounding with stone, are always troublesome; it has again and again been noticed, that in the preparation of the field each year, it apparently requires about as much labor to remove the stone as to perform the rest of the work; fields overrun with weeds and troublesome grapes, should not be taken for onions, as there is no root crop that requires so tender care in weeding; hence if weeds have already deposited their seeds from careless or indifferent cultivation, it is far better to postpone the operation for another season, or until the seeds shall have become annihilated; neither will soil so wet that they cannot be worked in early spring, give a good return of this crop.

The next important work is by the use of the plow; the depth should be varied according to circumstances; usually, however, quite shallow; say about four inches, but the finer, the better. The quantity of manure used and plowed in, should be from nine to ten cords or even more per acre, and not only made fine and free from lumps, but well decomposed; after which a coat of wood ashes or some other fertilizer should be spread upon the surface and well mixed with the soil; in about three weeks after planting, the surface should be moved, and continued to be moved once in eight or ten days, and during the season, another light dressing of some fertilizer applied and worked into the soil, that the rains and dews by this treatment will much facilitate the growth of the crop; therefore, the great secret of growing onions is found in preparing the soil at the outset and by having a clean culture afterwards; one hour's work just at the time the weeds are ready to start, is of more value than a day's labor after they have gained a strong foothold.

The onion, unlike most other root crops, may be grown on the same soil for a series of years, without any diminution of quantity or quality, provided the field be kept under a clean cultivation and fine tilth. The writer has known of an onion bed to grow this crop for twenty years, and the last crop equal to the first.

Although six hundred bushels is considered only a medium crop while eight or ten hundred is considered a large one, we would say to the young man, be not deluded in becoming rich at once by growing onions. Yet we believe, with having a suitable

soil, patient and honest industry and near a good market, probably no crop for a series of year will pay better; but the application of manure, keeping the ground in good tilth and the non-cultivation of weeds must not be lost sight of.

CABBAGE.

Fifty years ago and even since that time it was supposed that the only place for cabbage to make anything like a respectable growth was in very low, deep soils; consequently the lowest part of the farm was selected for the cabbage yard. This was all very well as this crop generally does well on such soils; such localities receiving the wash from the neighboring lands, the soil would be richer than elsewhere; and as the cabbage delights to work in a rich, friable soil, this was a wise selection.

It is now generally conceded that any good corn land is also good soil for the cabbage, provided it be *well manured*; reclaimed meadow and swamp lands are also excellent soil for this crop when the water level is kept at a proper distance from the surface; say from twenty to twenty-five inches. Within a few years we have witnessed as good fields with as solid and compact heads, as on any soil mentioned.

The cabbage, unlike the onion, generally requires a strong, heavy soil, and good animal manure,—any animal except the hog; if this be used, especially on wet soil, stump-foot generally follows, and this is death to the crop. If five or six cords of manure only, are to be used, it is far better to apply the whole to half an acre, not only for the sake of saving a large amount of labor, but for the purpose of securing a better return, and leaving the field in better condition for the next year's crop; it is the last twelfth cord to the acre that gives the hard head and the heavy crop; but with half manure, we may expect loose, spongy heads, and a light return.

From what we learn about growing this crop, it appears that with a deep surface soil resting upon a clayey bottom, with a liberal supply of barn manure and fertilizers, any farmer need not demur or stand in fear of over-stocking the market or selling at a losing price, as almost all farmers have or may have a home market, by feeding them to stock; twenty tons per acre is not a heavy crop.

ROOT CROPS GENERALLY.

A *dry* soil is essential for the root crops, yet *moisture* is beneficial to *all*, and is indeed indispensable to their growth; but *wet* is detrimental to *all* root crops.

A *rich* soil is necessary to grow good crops and particularly the root crops, as nourishing and abundant food is for fattening stock. It is well known that poor pasturage and coarse forage may *keep*, yet it will not *fatten* stock; it is equally true that, although field crops will live and grow upon poor soil, the product will be still greater in a rich one.

Last, but not least, a good after-culture is indispensable. This consists in keeping the surface constantly moved, killing weeds and thinning the plants; although the soil may be dry and rich, and deep and well pulverized, yet the labors of the owner will not avail much if he neglects to keep the field clean from weeds. Crowding too many plants into a certain space is like overstocking a pasture, or making beef from half-feed, therefore a moderate number of plants will give much better profit than a large number upon the same soil "crowded and huddled together." This is a hard lesson for farmers generally to learn; still it must be learned or ill success will follow.

Finally in the cultivation of root crops, we have to say to the young man who intends to make root growing a specialty, be not deceived by those who may tell you that a thin, dry, hungry soil "will do about as well as any" provided you will cultivate and manure it. You may as well expect fertile ideas from a shallow brain by being educated with Latin and Greek; but be satisfied with nothing short of a *well drained friable soil.*

It is plain that agriculture has not kept pace in improvements with other pursuits and doubtless from the fact that our young men for the last quarter of a century, have been nurtured and taught in the principle that tilling the soil is low and degrading, instead of being healthy, and honorable and independent; but as agriculture loses the services of our young men, and as our fields become deserted for other employments, it is in effect striking out of existence the spring season or having it forget to blossom; but what is wanted of our young men, is that they should accumulate facts that shall enlarge the mind and increase the understanding, by bringing into operation those hidden elements of mental perception and

concentration; furthermore, it is not enough, that we simply collect facts and lay down rules, that we arrive at just conclusions, unless our observations are of the right kind and made in the right way. If they are not exact and accurate, and conducted and reported so as to admit of proper arrangement and comparison, they are of little value, and may lead to false and mistaken views.

As an illustration, Farmer Jones, who has gained a knowledge by careful study and observation, of the composition of soils in his fields, and by knowing what elements are wanting for particular crops,—having also acquired a knowledge to some extent of fertilizers, and those best adapted to the soil and the intended crop, reports to the Farmers' Club, or to the Agricultural Society of which he is a member, a complete success. Upon the receipt of this report, Farmer Smith, or somebody else, with a view of carrying off the palm by obtaining a higher premium, "starts off" with having a very limited knowledge of the elements in the soil, and still less of special manures, perhaps uses two or three times the quantity used by his neighbor, and applies it in a different way, contrary to all theory or common sense, and instead of the experiment being like that of his neighbor, a success, the operation is a complete failure.

Hence, the difference in the two farmers, the one having some knowledge of the composition of soils, and knowing just how to apply manures and fertilizers, has made at least one movement towards "successful farming," while the other, having only a vague knowledge, or no knowledge at all of either, has made a similar step in the opposite direction; and thus it is that farmers have yet much to learn as to the nature of soils, the value of manures and fertilizers, and the way in which they should be applied to different soils and to the intended crops.

In closing, we have simply to say, that we consider our common and High schools defective, inasmuch that they teach comparatively nothing of the natural sciences, which are the basis of sound practical knowledge of things; and this is what every farmer, be it as it may, with others, can't afford to be without. Teach our children as much mathematics as we will, and in as many languages as we please, but not until we have given them a well grounded view of those sciences which they are to practice in after life.

EPHRAIM GRAHAM, *Chairman.*

COMMITTEES AND PREMIUMS

FOR THE

TWENTY-SECOND ANNUAL EXHIBITION,

TO BE HELD AT FITCHBURG,

TUESDAY, SEPTEMBER 29th, 1874.

No person will be allowed to become a competitor for any of the Premiums herein offered, unless he shall have made an entry for the same, with the Secretary, within the time prescribed for each class, nor unless he shall have furnished all required statements relating thereto, within the specified time.

For the convenience of those who live at a distance, entries may be made by mail; and all entries so made must be delivered at some post-office one day previous to the expiration of the time specified, and must bear proof of having been so delivered, either by postmark, or a certificate of registry from the postmaster.

☞ Communications for the Secretary should be sent to Fitchburg.

STOCK.

All entries for premiums under this head, must be made on or before the Friday previous to the Show, except Horses and Poultry, which may be as late as the Monday previous.

All persons who are required to furnish a statement, must do so to the Secretary, at the time of making the entry, and he shall post copies on the day of exhibition.

All live stock must be owned by the person entering the same.

Each entry of stock for the pens must specify the breed of the animal, if known, and the age.

Fat cattle and working cattle must be weighed on the scales on the grounds of the Society, and a certificate furnished the Secretary.

The weight of all other stock will not be required.

All stock, except oxen shown only in Town Teams, taken from the grounds before 4 o'clock P. M. on Tuesday, without permission of the President, shall forfeit all premiums that may have been awarded to it.

The committees on Neat Stock, Sheep, Swine and Poultry, and on the Trials of Working Oxen, shall make their awards previous to 3 o'clock P. M. on Tuesday. They shall designate the premiums immediately with printed ribbons or cards, blue for first, red for second, and white for third, and shall make their reports to the Secretary previous to 12 o'clock M. on Wednesday.

The Society will provide good hay for all Stock entered for premium or exhibition during the time of the Show, and will furnish grain at cost, to all who may require it.

Hereafter, the best animals exhibited shall be entitled to the premiums, without regard to former awards.

Committee in charge of Grounds.—D. C. Miles, Westminster; J. M. Sawtell, Joseph Cushing, Fitchburg.

Committee on Pedigrees.—E. T. Miles, Joel Page, Fitchburg; Augustus Whitman, Leominster.

Committee on Animals for Exhibition, with authority to recommend gratuities.—Ephraim Graham, of Lunenburg.

Committee on Forage.—A. P. Goodridge, Fitchburg.

Committee on Finance.—D. C. Miles, Westminster.

THOROUGH-BRED STOCK.

Committee.—Rufus Woodward, Worcester; E. Lewis Sturtevant, So. Framingham; O. B. Hadwen, Worcester; Merrick Wallace, Ashburnham; Estabrook Moore, Leominster; Edwin D. Works, Fitchburg; Ezra Sawyer, Sterling.

SHORTHORNS, AYRSHIRES, JERSEYS, DEVONS, OR OTHER THOROUGH-BRED STOCK.

Herds consisting of one bull and not less than four females, all one year old and upwards, and owned by the competitor for four months preceding the show. Two premiums: $6, 4.

BULLS.

Two years old and upwards. Two premiums: $5, 3.
One year old and under two. Two premiums: $4, 2.
Calves (under one year). Two premiums: $4, 2.

COWS.

Four years old and upwards. Two premiums: $3, 2.
Three years old and under four. Two premiums: $2.50, 1.50.
Two years old and under three. Two premiums: $2, 1.
One year old and under two. Two premiums: $1.50, 1.
Calves (under one year). Two premiums: $1.50, 1.

Competitors may make such statements to the Committee as they please, all of which shall be considered.

STOCK NOT THOROUGH-BRED.

Thorough-bred Stock may compete in the following classes, but shall have no advantage on account of blood or pedigree.

MILCH KINE.

Committee.—Alden Derby, Leominster; Joel Page, Fitchburg; Josiah Puffer, Ayer.

Herds of four cows or heifers, each. Two premiums: $5, 3.50.

The committee will regard age, expense of keeping, &c.

Cows for butter. Two premiums: $2.50, 2.
Heifers, three years old, for butter. Two premiums: $2.50, 2.
Heifers, two years old, for butter. Two premiums: $2, 1.50.

Cows, for milk. Two premiums: $2.50, 2.
Heifers, three years old, for milk. Two premiums: $2.50, 2.
Heifers, two years old, for milk. Two premiums: $2, 1.50.

Competitors may make such statements to the Committee as they please, all of which shall be considered.

HEIFERS AND HEIFER CALVES.

Committee.—Franklin Nourse, Sterling; Silas Hosmer, Fitchburg; George Grout, Leominster.

Intended to be kept for the Dairy.

Two years old. Two premiums: $2, 1.50.
Yearlings. Two premiums: $1.50, 1.
Calves more than four months old. Two premiums: $2, 1.50.
Calves more than four months old, raised by hand. Two premiums: $2, 1.50.

Persons exhibiting calves raised by hand, shall furnish statements to the Secretary, of the manner of raising.

YEARLING STEERS, STEER CALVES AND PENS OF CALVES.

Committee.— Edward Bacon, Westminster; Henry Wood, Leominster; Charles Hastings, Lunenburg.

Yearlings. Two premiums: $1.50, 1.
Trained Yearlings. Two premiums: $1.50, 1.
Calves. Two premiums: $3, 2.
Calves raised by hand. Two premiums: $3, 2.
Trained Calves. Two premiums: $2, 1.50.
Best Minor Trainers. Two premiums: $1.50, 1.
Best pen of Calves, not less than four. Two premiums: $5, 2,50.

Persons exhibiting Calves raised by hand, shall furnish a statement to the Secretary, of the manner of raising.

Calves entered in Pens of Calves cannot compete for premiums as single animals.

WORKING OXEN AND STEERS.

Committee. — Daniel Putnam, Lunenburg; C. C. Boyden, Leominster; Silas Pratt, Fitchburg.

Working Oxen. Two premiums: $5, 3.
Best Minor Teamsters. Two premiums: $2.50, 1.50.
Steers, three years old. Two premiums: $2.50, 2.
Best Minor Teamster. Two premiums: $2, 1.
Two years old. Two premiums: $2, 1.50.
Trained two years old. Two premiums: $2, 1.
Best Minor Trainers. Two premiums: $1.50, 1.

The Working Oxen will be tried attached to loads weighing, including the cart, one-third more than themselves.

The three years old steers will be attached to carts and tried like the oxen on the same ground; the cart and load to equal the steers in weight.

FAT CATTLE.

Committee.—John Lowe, Fitchburg; E. R. Carter, Westminster; Cephas Derby, Leominster.

Best Fat Ox. Two premiums: $4, 2.50.
Best Fat Cow. Two premiums: $3, 1.50.
Best Fat Steer or Heifer. Two premiums: $3, 2.

All competitors with fat cattle, must furnish a statement to the Secretary, of the mode and expense of feeding.

SWINE.

Committee.—Natt Cowdin, Fitchburg; E. P. Thompson, Leominster; Kendall Porter, Lunenburg.

Must be entered like other stock.

Boars more than one year old. Two premiums: $2, 1.50.
Less than one year old. Two premiums: $1.50, 1.
Best Fat Hogs, having regard to age. Two premiums: $4, 2.
Fat Pigs less than eight months old. Two premiums: $2, 1.
Breeding Sows. Two premiums: $4, 2.
Weaned Pigs, not less than four. Two premiums: $2, 1.

All Swine, and each litter of Pigs, will be allowed fifteen cents mileage for each mile more than two, that they are brought.

POULTRY.

Committee.—W. A. Carleton, Ephraim Whitman, Fitchburg; M. W. Wallis, Ashburnham.

Must be entered like other stock.

Barn-yard fowls, not less than a trio.

Brahmas. Two premiums: $1, .50.
Black Spanish. Two premiums: $1, .50.
White Leghorns. Two premiums: $1, .50.
Any other breed. Two premiums: $1, .50.
Turkeys, not less than a trio. Two premiums: $1.50, 1.
Geese, not less than a trio. Two premiums: $1.50, 1.
Ducks, not less than a trio. Two premiums: $1.50, 1.

TOWN TEAMS.

Committee.—Solon Carter, Leominster; Reuben Vose, Winchendon; Abel Marshall, Fitchburg.

Best Town Teams, not less than fifteen yoke from any one town. Two premiums: $15, 10.

These teams may consist of either oxen or steers, or both.

HORSES.

Entries for all horses where entrance fee is required to be paid, must be made before 9 o'clock A. M. of the day on which they are exhibited.

GENTLEMEN'S DRIVING HORSES—SINGLE.

Committee.—Ohio Whitney, Ashburnham; S. W. A. Stevens, So. Gardner; Cephas Derby, Leominster.

Gentlemen's Driving Horses. Four premiums; $6, 4, 3, 2.

Entrance fee, $1.

Speed considered, but not to govern.

In the trial of horses in this class, they shall make a standing start from the Judges' stand.

MATCHED DRIVING AND FAMILY HORSES.

Committee.—John F. Brown, Lunenburg; A. L. Burditt, Leominster; F. W. Wright, Ashby.

Matched Driving Horses. Four premiums: $6, 4, 3, 2.

Family Horses—Single. Four premiums: $6, 4, 3, 2.

Entrance fee, $1.

COLTS.

Committee.—Charles H. Brown, Ashby; Wm. L. Brown, Lunenburg; Joel Hayward, Ashby.

Stallions, three years old. Two premiums: $5, 2.50.

Geldings, three years old. Two premiums: $5, 2.50.

Fillies, three years old. Two premiums: $5, 2.50.

Stallions or Geldings, two years old. Two premiums: $3, 1.50.

Fillies, two years old. Two premiums: $3, 1.50.

Yearling Colts. Two premiums: $2.50, 1.50.

STALLIONS, MARES AND SUCKING COLTS.

Committee.—Warren Simonds, Baldwinsville; Antipas Maynard, Ashburnham; Francis Buttrick, Fitchburg.

Best Stallions for general use, four years old and upwards. Two premiums: $10, 5.

Breeding Mares. Two premiums: $4, 2.50.

Colts less than one year old. Two premiums: $2, 1.50.

The Mares must be four years old and upwards, and accompanied by their Colts.

No premium shall be awarded to a mare known to be unsound.

CROPS.

All entries for premiums in this department must be made with the Secretary, on or before June 15th, with the exception of Eng-

lish turnips and cabbages, which must be entered on or before August 15. Immediately after these dates, the Secretary will transmit to all competitors a blank form, adopted by the Trustees, to correspond with the requirements of the Board of Agriculture.

GRAIN.

Committee.—Cyrus Kilburn, Lunenburg; Abel Marshall, Fitchburg; Caleb S. Merriam, Westminster.

The committee may award gratuities for valuable new varieties of grain.

For the most profitable crops of corn, wheat, rye, barley and oats, one acre each; of cabbages, beans and flax, one-eight acre each; the product of corn to be not less than 4,320 lbs. on the cob; that of wheat, rye, barley and oats, not less than 1,000 lbs. of grain each:

Corn. Two premiums: $5, 4.
Wheat. Two premiums: $5, 4.
Rye. Two premiums: $2, 1.
Barley. Two premiums: $2, 1.
Oats. Two premiums: $2, 1.
Field Beans. Two premiums: $1, .50.

Samples must be exhibited at the Fair.

ROOT CROPS AND CABBAGES.

Committee.—A. B. Holden, Westminster; Whiting Gates, Leominster; Joseph Whitney, Sterling.

For the most profitable crops of potatoes, one-fourth acre each; of carrots, onions, beets and turnips, one-eight acre each:

Potatoes, not less than 3,000 lbs. Two premiums: $4, 2.50.
Carrots, not less than 5,500 lbs. Two premiums: $2, 1.50.
Onions, not less than 2,000 lbs. Two premiums: $1.50, 1.
Sugar Beets. Two premiums: $1, .50.
Mangle Wurzel. Two premiums: $1, .50.
English Turnips. Two premiums: $1.50, 1.
Turnips of any other variety. Two premiums: $1.50, 1.
Cabbages. Two premiums: $1, .50.

FARMS.

Committee.—Geo. S. Houghton, Fitchburg; C. C. Boyden, Leominster; Ohio Whitney, Ashburnham.

All entries must be made at least one week before commencing the experiments.

Best managed and cultivated Farm, to be awarded and paid in 1874. Two premiums: $50, 25.

Entries must be made on or before May 1st, 1873.

EXHIBITION AT THE HALL.

No article intended for the Hall will be entitled to a premium unless it shall have been deposited by 2 o'clock P. M., on Monday.

All articles should be plainly marked with the name and residence of the exhibitor, except samples of Bread and Butter, which must be designated by numbers. A strict compliance with these regulations will be absolutely necessary to entitle competitors to any premiums that may be awarded to them.

APPLES, PEACHES, PLUMS AND QUINCES.

Committee.—Jabez Fisher, George Jewett, Fitchburg; Porter Piper, Leominster.

APPLES.

Twelve varieties of five specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: $2, 1.50.
Three varieties of five specimens each. Two premiums: $1.50, 1.
Best exhibition of twelve specimens of Baldwins. Two premiums: $1, .50.
Hubbardston Nonesuch. Two premiums: $1, .50.
R. I. Greenings. Two premiums: $1, .50.
Roxbury Russets. Two premiums: $1, .50.
Gravensteins. Two premiums: $1, .50.
Palmer Greenings. Two premiums: $1, .50.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

PEACHES.

Best collection. One premium: $3.
Best Dishes or Baskets. Two premiums: $2, 1.

PLUMS.

Best collection. One premium: $2.
Best plates. Two premiums: $1, .50.

QUINCES.

Best dishes or baskets. Two premiums: $1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

PEARS AND GRAPES.

Committee.—Rodney Wallace, Fitchburg; Ohio Whitney, Ashburnham; Estabrook Moore, Leominster.

PEARS.

Twelve varieties of twelve specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: $2, 1.50.
Three varieties of five specimens each. Two premiums: $1.50, 1.
Best exhibition of twelve specimens of Bartletts. Two premiums: $1, .50.
Seckle. Two premiums: $1, .50.
Flemish Beauty. Two premiums: $1, .50.
Duchess. Two premiums: $1, .50.
Louise Bonne de Jersey. Two premiums: $1, .50.
Lawrence. Two premiums: $1, .50.
Beurre d'Anjou. Two premiums: $1, .50.
Sheldon. Two premiums: $1, .50.

GRAPES.

Best displays of varieties of Native Grapes. Two premiums: $5, 3.
Best six clusters Concord. Two premiums: $1, .50.
Best six clusters Delaware. Two premiums: $1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

ASSORTED FRUITS AND FLOWERS.

Committee.—Mrs. J. F. D. Garfield, Mrs. Stephen Shepley, Fitchburg; Mrs. M. T. Gardner, Shirley Village.

ASSORTED FRUITS.

Best Dishes or Baskets. Two premiums: $2, 1.

PLANTS IN POTS.

Best displays of named Plants in Pots. Two premiums: $2, 1.
Best three named Plants in Pots. Two premiums: $2, 1.

CUT FLOWERS.

Best displays of Cut Flowers. Two premiums: $2, 1.
Best five named Asters. Two premiums: $2, 1.
Best five named Dahlias. Two premiums: $2, 1.
Best five named Verbenas. Two premiums: $2, 1.
Best pair of Parlor Bouquets. Two premiums: $2, 1.
Best pair of Hand Bouquets. Two premiums: $2, 1.

The same plants in pots cannot compete for both the best display and the best three; nor can the same Asters, Dahlias, or Verbenas, compete for the best display and the best five.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

VEGETABLES.

Committee.—Martin Johnson, Lunenburg; Lawrin Pratt, Fitchburg; Amos B. Holden, Westminster.

Best collections Kitchen Vegetables. Two premiums: $4, 3.
Collections of Potatoes. Two premiums: $2, 1.
Marrow Squashes. Two premiums: $1, .50.
Hubbard Squashes. Two premiums: $1, .50.
Crookneck Squashes. Two premiums: $1, .50.
Pumpkins. Two premiums: .75, .50.
Cabbages. Two premiums: .75, .50.
Cauliflowers. Two premiums: .75, .50.
Celery. Two premiums: .75, .50.
Onions. Two premiums: .75, .50.
Turnip Beets. Two premiums: .75, .50.
English Turnips. Two premiums: .50, .25.
Tomatoes. Two premiums: .50, .25.
Field Beans. Two premiums: .50, .25.
Lima Beans. Two premiums: .50, .25.
Seed Corn, in traces. Two premiums: $1, .75.

The committee will regard perfection of growth and quality, and not size.

In addition to the above, there will be allowed, for gratuities, ten dollars.

Of squashes, pumpkins, cabbages and celery, there should be six specimens in each lot; of cauliflowers, three; of onions, beets, turnips and tomatoes, one peck in each lot; of field beans, one-half peck; and of Lima beans, two quarts.

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES AND JELLIES.

Committee.—Mrs. Leonard Downe, Mrs. Thomas Palmer, Fitchburg; Mrs. Cyrus Kilburn, Lunenburg.

Bread made by the exhibitor.

White Bread. Three premiums: $2, 1, .50.
Unbolted Wheat Bread. Three premiums: $2, 1, .50.
Bolted Rye Bread. Three premiums: $2, 1, .50.
Rye and Indian Bread. Three premiums: $2, 1, .50.

BUTTER AND CHEESE.

Lump Butter, not less than 12 lbs. Two premiums: $4, 3.
June Tub Butter, not less than 25 lbs. Two premiums: $3, 2.
Sept. " " " " " " " Two premiums: $3, 2.
Cheese, not less than 50 lbs. Two premiums: $2, 1.50.

PICKLES AND HONEY.

Pickles. Two premiums: $1, .50.
Virgin Honey in the Comb. Three premiums: $2, 1, .50.
Canned Fruits, best collections. Two premiums: $2, 1.

In addition to the above, there will be allowed for gratuities, ten dollars.

Competitors will be required to furnish to the Secretary, a detailed statement in writing, of the process of manufacturing butter, cheese and pickles; and no others shall be considered.

MACHINERY.

Committee.—D. C. Miles, Westminster; Fr. G. Fessenden, Stephen Shepley, J. M. Sawtell, Fitchburg.

The above committee are empowered to offer such premiums, and give such gratuities, as may be thought best.

MANUFACTURED ARTICLES.

Committee.—Francis A. Whitney, Ashburnham; John H. Lockey, Leominster; J. F. Haskins, Fitchburg.

Specimens exhibited must be manufactured by the competitor.

For the best specimens of manufactured articles, exclusive of ladies' home manufacture, actually produced by the exhibitor, there will be placed at the disposal of the committee, the sum of one hundred dollars.

For the best exhibition of manufactured articles, not actually the product of the exhibitor, there will be placed at the disposal of the committee, the sum of fifty dollars.

FINE ARTS.

Committee.—Miss Myra B. Richardson, Mrs. Joel Page, Miss Louise M. Haskell, Fitchburg.

Best collections by a Photographic Artist. Two premiums: $2, 1.
Oil Paintings. Two premiums: $2, 1.
Best Crayon Drawings. Two premiums: $1.50, 1,
Pencil Drawings. Two premiums: $1, .50.
Best specimen of Penmanship by a non-professional. One premium: .50.

In addition there will be placed at the disposal of the committee, for gratuities, the sum of ten dollars.

Specimens exhibited must be actually executed by the competitor.

FANCY ARTICLES.

Committee.—Mrs. Jabez Fisher, Mrs. E. T. Miles, Mrs. L. H. Bradford, Fitchburg.

For the best specimens of Ladies' Useful and Fancy Articles of their own manufacture, including specimens of nice mending and darning, there will be placed at the disposal of the committee, the sum of thirty dollars.

COMMITTEES' REPORTS.

Committee.—The President, Vice Presidents and Secretary.

For the purpose of inducing the chairmen of the several committees to take upon themselves more labor and care in elaborating their reports, the following premiums will be paid: $10, 6, 4.

Detailed reports in connection with awards (except on Grain and Root Crops), must be delivered to the Secretary on or before November 1st.

PROSPECTIVE EXPERIMENTS.

FOREST TREES.

Committee.—W. B. Hosmer, George Merriam, Leominster; J. P. Putnam, Fitchburg.

For the best plantation of any kind of Forest Trees, suitable for fuel or timber, raised from the seed, not less than five hundred in number, which shall be in the most flourishing condition in the fall of 1876. Two premiums: $15, 10.

Entries must be made on or before the first day of June.

TROUT.

Committee.—Jabez Fisher, L. H. Bradford, Fitchburg; M. T. Gardner, Shirley.

For the most successful Experiments in the artificial propagation of Trout, entries to be made on or before June 1st, 1872; premiums to be awarded in 1874. Two premiums: $25, 10.

COMMITTEE OF ARRANGEMENTS.

D. C. MILES, Westminster.
J. M. SAWTELL, Fitchburg.
JOSEPH COZZENS, Leominster.
FR. G. FESSENDEN, Fitchburg.
F. F. WOODWARD, Fitchburg.

RULES.

All teams entered for draught must be owned by the person entering the same.

Any person competing for a premium, who shall serve on the committee having charge of the department in which he competes, shall retire from the committee while his own competition is in question.

The several committees will not consider themselves bound by the terms of the above offers, to award a premium for anything which they shall deem inferior.

Any person to whom a premium shall have been awarded, in consequence of any deception or misrepresentation used by him, shall not only forfeit such premium, but afterward be incapable of competing for the Society's premiums.

All persons, not members of the Society, to whom may be awarded a premium, or premiums, amounting to five dollars or upward, shall receive a certificate of membership for five dollars, and the balance in cash. If the amount shall be less than five dollars, a deduction of fifty per cent. will be made, unless the individual chooses to make the amount up to that sum, and receive a certificate of membership.

All premiums not demanded on or before November 30th, will revert to the Society.

OFFICERS OF THE SOCIETY FOR 1874,

Elected at the Annual Meeting, December 4th, 1873.

D. C. MILES, of Westminster, *President.*

J. M. SAWTELL, of Fitchburg,
JOSEPH COZZENS, of Leominster, } *Vice Presidents.*

FR. G. FESSENDEN, of Fitchburg, *Sec'y and Treasurer.*

TRUSTEES.

O. WHITNEY, Ashburnham.
JOEL. HAYWARD, Ashby.
CECIL F. HAYWARD, Ashby.
S. W. A. STEVENS, Gardner.
S. F. WHITNEY, Harvard.
W. B. Hosmer, Leominster.
C. C. BOYDEN, "
F. W. WHITNEY, "
CYRUS KILBURN, Lunenburg.
J. F. BROWN, "
ALFRED WHITING, Oakdale.
J. E. MERRIAM, Princeton.
A. STOCKWELL, Royalston.
J. O. PARKER, Shirley.
F. NOURSE, Sterling.
W. SIMONDS, Templeton.
D. C. MILES, Westminster.
EDWARD BACON, Westminster.
REUBEN VOSE, Winchendon.
JOSEPH CUSHING, Fitchburg.
JABEZ FISHER, "
ABEL MARSHALL, "
JOEL PAGE, "
LYMAN PATCH, "
E. T. MILES, "
WM. WOODBURY, "
CHAS. BRIGHAM, "
E. D. WORKS, "
JOHN F. HASKINS, "
E. P. MONROE, "
CHAS. FESSENDEN, "
J. Q. WRIGHT, "
L. ALDRICH, "
STEPHEN SHEPLEY, "
F. F. WOODWARD, "

E. T. MILES, of Fitchburg, elected *Member of the State Board of Agriculture*, December 6th, 1871, for three years.

TRANSACTIONS

OF THE

WORCESTER NORTH

AGRICULTURAL SOCIETY,

FOR 1874,

TOGETHER WITH A LIST OF THE

COMMITTEES AND PREMIUMS FOR 1875.

FITCHBURG:
PRINTED AT THE OFFICE OF HENRY F. PIPER,
1874.

SECRETARY'S REPORT.

The twenty-second annual exhibition was held on the grounds of the Society on Tuesday, September 29th.

The weather was all that the oldest attendant had a right, founded upon long experience, to expect, being cold, rainy and disagreeable to the last degree. It is to be regretted that when the General Court in its wisdom fixed the day of holding the annual show it should have neglected to settle the weather also.

The exercises were in accordance with established custom, first in order being the trials of working oxen and steers at 9½ o'clock A. M., followed by exhibitions of gentlemen's driving horses, family matched horses and town teams, which occupied the forenoon.

Dinner was served at 12½ o'clock P. M., Rev. W. W. Colburn, invoking the Divine blessing. After a prolonged and successful attack upon the good things abundantly provided by Mr. F. W. Aldrich, President D. C. Miles called the assembly to order and a quartette composed of Messrs. W. W. Clark, John Mather, S. A. Wheeler, Jr., and E. D. Hewins, furnished abundant evidence that excellent singing is the natural *dessert* of a good dinner. The President spoke briefly upon the importance of Agricultural exhibitions; Mr. Geo. M. Baker of Mansfield, delegate from the State Board of Agriculture, expressed himself as highly pleased with the Fair and prepared to report favorably of everything except the weather; Col. Ivers Phillips of Worcester, the first president of the society, Mr. D. J. Tucker of California, Rev. W. W. Colburn and George Trask of Fitchburg, and others, made very interesting addresses.

The show of neat stock was remarkably fine. The herds of A. & E. Whitman's Short-horns, Capt. E. T. Miles' Ayrshires, J. F. Brown's and Alden Derby's Jerseys and Stillman Stone's Jamestowns, presented an exhibition of Thorough-bred stock seldom equalled at cattle shows. The display of working oxen and fat cattle was good, and that of poultry has never been excelled at any previous exhibition of the Society. Entries of horses were very numerous.

In the hall the show was about the average. There was a smaller quantity of fruit but the quality was fully up to the usual standard. The display of flowers by Mr. J. M. Sawtell was very fine and the contributions of last year by Mr. Sylvanus Sawyer were missed.

The department of fancy articles and fine arts was well filled and of the usual variety while that of mechanics was empty.

Great credit is due to Capt. E. T. Hayward and his efficient aids for their services in preserving order throughout the day.

At 2 o'clock P. M., notwithstanding the chilly, uncomfortable weather and drizzling rain, which rendered the track heavy, and greatly reduced the number of visitors, there was a very successful exhibition of trotting horses, for premiums offered by the Society.

Two years ago, this branch of the exhibition was discontinued, on the ground of "reform," and because the "'Agricultural Horse Trot' was losing favor among the Agricultural Societies of New England." As in most reforms, attention was wholly given to effects, while causes were neglected; the reformers' one idea substituted for human experience and average common sense, and the result was a depleted treasury, and an increased demand for horse trots, while, instead of "losing favor," no Agricultural Society in New England has been without its horse trot the present season, and still the standard of morals is believed to be as high as ever.

The experience of this year, proves the statement of the secretary of a year ago, that one or two men cannot make a Fair. The citizens of Fitchburg, in particular, must either show more interest in the well-being of the Society, or else be prepared to see it go where all good Agricultural Societies go—to some town whose people manifest a desire to promote the growth and development of agriculture and kindred pursuits, and whose merchants and manufacturers are willing to devote a part of one day in the

year, to the interests of the Society, instead of staying at home, to "growl," because the Society chooses to hold its exhibition where it has room and conveniences for so doing, rather than to build its pens and barns in the business streets of a crowded city. It rests with Fitchburg, whether this Society continues with its citizens, or falls into more hospitable hands.

EDW. B. SAWTELL, *Secretary.*

REPORTS OF COMMITTEES.

THOROUGH-BRED STOCK.

The committee award the following premiums:

SHORTHORNS—HERDS.

A. & E. Whitman, 1st premium,	$6 00

BULLS, TWO YEARS OLD AND UPWARDS.

A. & E. Whitman, 1st prem.,	$5 00
" " 2d prem.,	3 00

ONE YEAR OLD AND UNDER TWO.

A. & E. Whitman, 1st prem.,	$4 00
" " 2d prem.,	2 00

COWS, FOUR YEARS OLD AND UPWARDS.

A. & E. Whitman, 1st prem.,	$3 00
" " 2d prem.,	2 00

THREE YEARS OLD AND UNDER FOUR.

A. & E. Whitman, 1st prem.,	$2 50
" " 2d prem.,	1 50

TWO YEARS OLD AND UNDER THREE.

A. & E. Whitman, 1st prem.,	$2 00
" " 2d prem.,	1 00

ONE YEAR OLD AND UNDER TWO.

A. & E. Whitman, 1st prem.,	$1 50
" " 2d prem.,	1 00

CALVES (UNDER ONE YEAR).

A. & E. Whitman, 1st prem.,	$1 50

JERSEYS—HERDS.

J. F. Brown, 1st prem.,	$6 00
Alden Derby, 2d prem.,	4 00

BULLS, TWO YEARS OLD AND UPWARDS.

Alden Derby, 1st prem.,	$5 00

ONE YEAR OLD AND UNDER TWO.

J. F. Brown, 1st prem.,	$4 00
Alden Derby, 2d prem.,	2 00

COWS, FOUR YEARS OLD AND UPWARDS.

J. F. Brown, 1st prem.,	$3 00
Alden Derby, 2d prem.,	2 00

TWO YEARS OLD AND UNDER THREE.

J. F. Brown,	$2 00

ONE YEAR OLD AND UNDER TWO.

J. F. Brown, 1st prem.,	$1 50
" 2d "	1 00

CALVES, UNDER ONE YEAR.

J. F. Brown, 1st prem.,	$1 50
" 2d prem.,	1 00

The committee regret that the herd of Capt. E. T. Miles was not entered for premiums. His splendid Ayrshires never looked better, and he deserves the thanks of the Society for adding his stock to the exhibition.

E. D. Works, *Acting Chairman.*

Statement of Alden Derby.

One of the herd entered for premium by me, is one-half Devon and one-half Jersey; has a calf four weeks and two days old the 25th day of September instant, and sold on that day for ten dollars. Milked from one to two quarts of milk twice a day after the calf was done.

STOCK NOT THOROUGH-BRED—MILCH KINE.

The committee award the following premiums:

BEST HERD—COWS FOR BUTTER.

Stillman Stone, 1st premium, $5 00

SINGLE COW FOR BUTTER.

Edwin Richardson, 1st prem., $2 50

SINGLE COW FOR MILK.

Edwin Richardson, 1st prem., $2 50

HEIFERS, THREE YEARS OLD, FOR MILK.

Edwin Richardson, 1st prem., $2 50

HEIFERS, TWO YEARS OLD, FOR MILK.

Franklin Nourse, 1st prem., $2 00

For the Committee, ALDEN DERBY.

Statement of Stillman Stone.

Herd of four cows entered for butter. Breed, Jamestown:

No. 1, 8 years.	Calved,	Sept., 1873	} Last week in Feb.,		
" 2, 8 "	"	Dec. 25, "	} 17 pounds butter.		
" 3, 5 "	"	March 1874.			
" 5, 5 "	"	March 1874.			
The last week in	March,	31	pounds	butter.	
" "	April,	32	"	"	
" "	May,	33	"	"	
The first week in	June,	33	"	"	
" " "	"	27	"	"	
" " "	"	25	"	"	
" " "	"	17	"	"	

No. 1, calves again, Nov. 29th.
" 2, " " Dec. 6th.
" 3, " " Jan. 18th.
" 4, " " Feb. 18th.

Feed from time of calving to June 10th, hay and 2 quarts corn meal 4 quarts shorts daily, since then pasture; commenced feeding sweet corn fodder Aug. 1st, and rowen Sept. 1st; No. 2 is dry, No. 1 gives 4 quarts milk daily.

HEIFERS AND HEIFER CALVES.

YEARLINGS.

Edwin Richardson, 1st premium,	$1 50
Stephen Shepley, 2d prem.,	1 00

For the Committee, FRANKLIN NOURSE.

WORKING OXEN AND STEERS.

WORKING OXEN.

N. B. Reed, 1st premium,	$5 00
Joseph Cushing, 2d prem.,	3 00

STEERS, THREE YEARS OLD.

N. B. Reed, 1st prem.,	$2 50

STEERS, TWO YEARS OLD.

N. B. Reed, 1st prem.,	$2 00
George Woods, 2d prem.,	1 50

TRAINED STEERS, TWO YEARS OLD.

N. B. Reed, 1st prem.,	$2 00

For the Committee, C. C. BOYDEN.

FAT CATTLE.

The committee report:

OXEN.

Joseph Cushing, 1st premium,	$4 00
" 2d prem.,	2 50

JOHN LOWE.

SWINE.

BOARS, LESS THAN ONE YEAR OLD.

Lyman Nichols, 1st prem.,	$1 50
" boar pig, gratuity,	2 00

For the Committee, NATT COWDIN.

POULTRY.

BRAHMAS.

E. Whitman, 1st premium,	$1 00
J. A. Marshall, 2d "	50

WHITE LEGHORNS.

J. E. Putnam, 1st prem.,	$1 00
J. A. Marshall, 2d "	50

PARTRIDGE COCHINS.

Geo. T. Younglove, 1st prem.,	$1 00
" " 2d "	50

DOMINIQUES.

W. A. Carleton, 1st prem.,	$1 00

CREVE COEURS.

John Phillips, 1st prem.,	$1 00

S. S. HAMBURGS.

W. S. Putnam, 1st prem.,	$1 00

B. B. RED GAMES.

George T. Younglove, 1st prem.,	$1 00

NATIVES.

T. D. Wood, 1st prem.,	$1 00

GEESE.

T. D. Wood, 1st prem.,	$1 00

DUCKS.

Stephen Shepley, 1st prem.,	$1 00
" " 2d prem.,	50
" " gratuity,	1 00
W. H. Ross, "	50

DOVES.

F. M. Lowe, gratuity,	50

For the Committee,

W. A. CARLETON, *Chairman.*

TOWN TEAMS.

Town of Leominster, 1st premium,	$15 00

It is to be regretted that more of our towns do not compete for the premiums in this class; or if they do not wish to compete, let them exhibit their good oxen for the benefit of the spectator.

For the Committee,

SOLON CARTER, *Chairman.*

POTATO RACE.

C. E. Farnum, 1st premium,	$3 00
John Sullivan, 2d prem.,	2 00

HORSE TROT.

2.55 CLASS.

S. E. Coombs, 1st premium,	$125 00
C. A. Howland, 2d prem.,	75 00
N. T. Dore, 3d prem.,	50 00

For the Committee,

EDWARD B. SAWTELL, *Chairman.*

FOOT RACE.

C. A. Farnum, 1st premium,	$3 00
D. J. Farnum, 2d prem.,	2 00

For the Committee,

S. J. M. WESTON, *Chairman.*

GENTLEMEN'S DRIVING HORSES—SINGLE.

J. H. Marshall, 1st premium,	$6 00
G. P. Hawkins, 2d prem.,	4 00
H. M. Stearns, 3d prem.,	3 00

For the Committee,

OHIO WHITNEY, *Chairman.*

MATCHED DRIVING HORSES.

John F. Brown, 1st premium,	$6 00

FAMILY HORSES.

W. S. Wetherbee, 1st premium,	$6 00
John F. Brown, 2d prem.,	4 00
E. C. Peck, 3d prem.,	3 00
J. H. Marshall, 4th prem.,	2 00

For the Committee, F. W. WRIGHT.

COLTS.

STALLIONS THREE YEARS OLD.

James Hannegan, 1st premium,	$5 00
J. M. Sawtell, 2d prem.,	2 50

STALLIONS TWO YEARS OLD.

Joseph Marshall, 1st prem.,	$3 00
Joseph Cushing, 2d prem.,	1 50

GELDINGS, THREE YEARS OLD.

Joseph Cushing, 1st prem.,	$5 00

FILLIES.

THREE YEARS OLD.

Joseph Cushing, 2d premium,	$2 50

YEARLINGS.

Joseph Marshall, 1st premium,	$2 50
Joseph Cushing, 2d prem.,	1 50

For the Committee,

C. H. Brown, *Chairman.*

STALLIONS, MARES AND SUCKING COLTS.

STALLIONS.

Lyman Patch, 1st premium,	$10 00
Joseph Marshall, 2d prem.,	5 00

BREEDING MARES.

Joseph Cushing, 1st prem.,	$4 00
Edward Foley, 2d prem.,	2 50

COLTS LESS THAN ONE YEAR OLD.

Edward Foley, 1st prem.,	$2 00
Joseph Cushing, 2d prem.,	1 50

For the Committee,

Warren Simonds, *Chairman.*

TROUT.

Ohio Whitney, 1st premium., $25 00

In the year 1872, the Society offered two premiums for the most successful experiments in the artificial propagation of trout, entries to be made on or before June 1st, 1872, premiums to be awarded in 1874.

For this competition we regret that there was but one entry made, that by Ohio Whitney of Ashburnham. At the time of the offer of the premiums, there were other parties interested, and it was hoped that two or three might be relied on to make entries. A committee having no knowledge of the subject, except what is acquired during the examinations, may easily be led astray by the enthusiasm of a single exhibitor, and hearing but one side of any disputed point, is likely to arrive at conclusions that would not stand the test of the more complete information that an earnest competition would bring out. We feel warranted, however, in deciding that Mr. Whitney has carried forward a very successful experiment in the artificial propagation and rearing of trout, much more so than the unaided fish would be capable of doing, for, while he has furnished every facility for their natural increase in the most prolific manner, he has also removed apparently every impediment to their full and rapid developement; and while by a careful assorting and separating of the different sized fish, they are prevented from exercising their cannibal propensity of eating one another. He has also refrained from the gustatory enjoyment that they are so capable of furnishing, on the ground that he loves his pets too well to think of eating them. This policy, if continued, will soon overrun his ponds and eventually cause a failure of what appears to us now as a most successful experiment and one deserving the first premium.

Mr. Whitney takes great pleasure in exhibiting his results, and in imparting to every one interested, the information which he has acquired concerning the habits of this beautiful and useful fish, and the conditions for their most perfect propagation and developement.

Jabez Fisher, *Chairman.*

APPLES, PEACHES, PLUMS AND QUINCES.

The committee make the following award:

APPLES.

TWELVE VARIETIES.

C. C. Boyden, 1st premium,	$3 00
Benjamin Derby, 2d prem.,	2 00

SIX VARIETIES.

Jabez Fisher, 1st prem.,	$2 00
G. P. Hawkins, 2d prem.,	1 50

THREE VARIETIES.

H. H. Brigham, 1st prem.,	$1 50

BALDWINS.

H. H. Brigham, 1st prem.,	$1 00
Thomas Upton, 2d prem.,	50

HUBBARDSTON NONESUCH.

D. S. Eaton, 1st prem.,	$1 00
Alvah Crocker, 2d prem.,	50

RHODE ISLAND GREENINGS.

Alvah Crocker, 1st prem.,	$1 00
C. C. Boyden, 2d prem.,	50

ROXBURY RUSSETTS.

John Page, 1st prem.,	$1 00
C. C. Boyden, 2d prem.,	50

PALMER GREENINGS.

Benjamin Derby, 1st prem.,	$1 00
C. C. Boyden, 2d prem.,	50

GRAVENSTEIN.

Edwin Richardson, 1st prem.,	$1 00
Jabez Fisher, 2d prem.,	50
John Page, gratuity,	1 00
G. P. Hawkins, gratuity,	1 00
A. S. Dole, "	75
Laurin Pratt, "	75
J. P. Putnam, "	50
Thomas Upton, "	50
Stillman Stone, "	50

PEACHES.

BEST COLLECTION.

Edwin Richardson, 1st premium,	$3 00

BEST DISHES.

J. M. Twichell, 1st prem.,	$2 00
Wm. Wood, 2d prem.,	1 00
S. Stone, gratuity,	75
E. T. Miles, "	50

PLUMS.

J. Haskell, 1st premium,	$1 00

QUINCES.

J. Haskell, 1st premium,	$1 00

JABEZ FISHER, *for Committee.*

PEARS AND GRAPES.

The committee award as follows:

PEARS.

TWELVE VARIETIES.—12 EACH.

Geo. Jewett, 1st premium,	$3 00
A. Crocker, 2d "	2 00

SIX VARIETIES—5 EACH.

J. Fisher, 1st prem.,	$2 00
J. M. Twichell, 2d prem.,	1 50

THREE VARIETIES—5 EACH.

C. C. Boyden, 1st prem.,	$1 50
H. H. Brigham, 2d prem.,	1 00

BARTLETTS—12 SPECIMENS.

C. C. Boyden, 1st prem.,	$1 00
G. B. Knowlton, 2d prem.,	50

SECKELS.

Geo. Jewett, 1st prem.,	$1 00
Stillman Stone, 2d prem.,	50

DUCHESS.

H. H. Brigham, 1st prem.,	$1 00
A. Crocker, 2d prem.,	50

LOUISE BONNE DE JERSEYS.

Benj. Derby, 1st prem.,	$1 00
A. Crocker, 2d prem.,	50

LAWRENCE.

Loren Pratt, 1st prem.,	$1 00
A. Crocker, 2d prem.,	50

BEURRE D'ANJOU.

H. H. Brigham, 1st prem.,	$1 00
Jabez Fisher, 2d prem.,	50

SHELDON.

Stillman Stone, 1st prem.,	$1 00
A. Crocker, 2d prem.,	50

FLEMISH BEAUTIES.

C. C. Boyden, 1st prem.,	$1 00
G. L. Hitchcock, 2d prem.,	50

GRAPES.

BEST DISPLAY OF NATIVES.

Jabez Fisher, 1st premium,	$5 00
George Jewett, 2d prem.,	3 00

CONCORD—SIX CLUSTERS.

Jabez Fisher, 1st prem.,	$1 00
E. T. Miles, 2d prem.,	50

DELAWARE—SIX CLUSTERS.

E. T. Miles, 1st prem.,	$1 00
Alvah Crocker, 2d prem.,	50

RODNEY WALLACE, *Chairman.*

ASSORTED FRUIT AND FLOWERS.

The committee report as follows:

J. M. Sawtell, 1st premium,	$2 00
" " " " best 3 plants in pots,	2 00

CUT FLOWERS.

W. J. Clifford, 1st prem.,	$2 00
B. Safford, 2d prem.,	1 00
J. M. Sawtell, 1st prem., best five named asters,	2 00
" " 1st " " " " dallias,	2 00
" " 1st " " " " verbenas,	2 00
Mrs. Nancy Snow, 1st prem., best pair parlor bouquets,	2 00
J. M. Sawtell, 1st prem., best pair hand bouquets,	2 00
Freddie Cozzens, gratuity, cut flowers,	1 00

VEGETABLES.

Committee award:

POTATOES.

D. Pratt, 1st premium,	$1 00

MARROW SQUASHES.

Z. Pratt, 1st prem.,	$1 00

HUBBARD SQUASHES.

Z. Pratt, 1st prem.,	$1 00

PUMPKINS.

G. H. Stockwell, 1st prem.,	75

CABBAGES.

Abel Marshall, 1st prem.,	50

ONIONS.

C. C. Boyden, 1st prem.,	75
Benjamin Derby, 2d prem.,	50

TURNIP BEETS.

F. Nourse, 1st prem.,	75
D. Pratt, 2d prem.,	50

ENGLISH TURNIPS.

J. P. Putnam, 1st prem., 50

TOMATOES.

Z. Pratt, 1st prem., 50

SEED CORN.

F. Nourse, 1st prem., $1 00
W. Wyman, 2d prem., 75

FIELD BEANS.

G. Billings, 1st prem., 50

GRATUITIES.

G. Billings, yellow-eyed beans, gratuity, 25
" " seed corn, gratuity, 50
S. Stone, " " " 50
C. Kilburn, " " " 50
D. S. Rice, " " " 25
G. H. Stockwell, cranberries, gratuity, 50
E. S. Eaton, turnip beets, 25
J. P. Putnam, " " " 25
" " turnips, " 25
E. S. Eaton, French turnips, " 25
A. Marshall, carrots, " 25
" " citrons, " 25
" " mangel-wurzels, " 50
" " marble-head squash, gratuity, 1 00
" " turban, " " 1 00
E. S. Eaton, carrots, gratuity, 25

For the Committee,

AMOS B. HOLDEN.

BREAD, BUTTER, CHEESE, PICKLES, &C.

The committee award as follows:

WHITE BREAD.

Mrs. S. M. Pierce, 1st premium, $2 00
" 2d prem., 1 00

UNBOLTED BREAD.

Rebecca Brooks, 3d prem., 50

RYE AND INDIAN BREAD.

Mrs. Geo. Billings, 1st prem.,	$2 00
Mrs. J. H. Wilker, 2d prem.,	1 00
Miss Ada Harris, 3d prem.,	50

LUMP BUTTER.

M. Johnson, 1st prem.,	$4 00
Alden Derby, 2d prem.,	3 00
Mrs. Levi Kendall, gratuity,	2 00

TUB BUTTER.

M. Johnson, 1st prem.,	$3 00

CHEESE.

Mrs. T. D. Wood, 1st prem.,	$2 00

CANNED FRUITS.

Mrs. S. Stone, 1st prem.,	$2 00
N. M. Gibson, 2d prem.,	1 00

PICKLES.

Mrs. T. D. Wood, 2d prem.,	50
Daniel Pratt, apple jelly, gratuity,	50
Miss Jennie Marshall, cake, "	50
Miss Carrie C. Marshall, canned peaches,	50
Mrs. Nancy Snow, jellies,	50

HONEY.

L. Burbank, 1st prem.,	$2 00
Jeffs, 2d prem.,	1 00

For the Committee, MRS. LEONARD DOWNE.

Statement of M. Johnson.

The butter which I enter for your consideration, was made from the milk of six cows; milk stood in shallow pans thirty-six hours; the cream kept one week; stirred and salted occasionally; use " Prize " churn.

Statement of Alden Derby.

The butter I offer, is made as follows: Keep Jersey cows; milk is cooled soon after milking, them set in deep cans (eight inches in diameter, twenty inches deep), for the cream to rise and the cans are placed in water to keep cool, and allowed to stand from twelve to thirty-six hours, then skim. Use the "Prize" churn with an altered dasher; work the butter with a rolling pin, rolling it on a board like pie crust; salt worked in the same way, using amount to suit taste of the consumer.

Statement of Mrs. Levi Kendall.

Butter was made from the milk of one Jersey Cow; milk was set in common tin pans about thirty-six hours. Cream salted slightly; about one ounce salt to the pound; worked by hand into pound lumps.

Statement of Mrs. T. D. Wood.

The process of making this new milk cheese is as follows: skim the night's milk; warm the milk; then add the cream to the warmed milk; when well stirred put the morning's milk to it, using runnet enough to form the curd; dip off the whey and when sufficiently hard cut the curd fine; salt with the best butter salt, using a dessert spoonful to a pailful of milk. Press from thirty-six to forty-eight hours, turning three or four times while pressing, then remove to a suitable shelf, turned daily, applying butter.

FANCY ARTICLES.

The Committee award the following gratuities:

Mrs. E. B. Sawtell, sofa pillow,	$ 75
" S. Wood, " "	50
" J. A. Russell, lap robe,	75
" E. B. Sawtell, slipper holder,	37

Mrs. C. H. Carey, towel rack,	37
" H. Batchelder, toilet cushion,	25
" C. A. Corey, mat, watch stand and tidy,	1 00
Miss Ella Clark, toilet set,	25
" Hattie Miles, collar box,	50
Mrs. S. G. Frost, moss cottage,	1 00
Mrs. S. G. Frost, grasses,	25
Miss Flora Whitcomb, fancy work, hens and chickens,	37
Mrs. L. H. Simonds, tidy,	50
" G. A. Cozzens, tidies,	37
Miss C. E. Marshall, tidies and lamp mat,	75
Mrs. S. Underwood, tidy,	50
" E. C. Hayden, tidy,	25
Miss Lizzie Lamb, tidy,	25
" E. J. Cushing, embroidered handkerchiefs,	50
" H. Batchelder, tidy,	37
Mrs. H. B. Dickson, rug, toilet mat, etc.,	2 00
Miss St. Germain, embroidered night dress,	75
Mrs. Nancy Snow, tidy and cushions,	75
" S. Stone, rug,	75
" S. L. Barber, bed quilt,	1 00
" A. Cushing, rugs,	50
P. W. Cushing, rug,	50
" F. Cushing, braided mat,	25
Master M. E. Choate, bed quilt,	37
Miss Stella Lowe, toilet cushion,	25
Henry Becker, wax cross,	25
Charlie Becker, collection birds' eggs,	25
Charlie Andrews, " " "	37
F. Clapp, collection insects,	37
Cushing, motto,	25
Mrs. Tottingham, embroidered apron,	25
" L. Ingalls, toilet cushion and mat,	37
H. J. Miles, collection of stamps,	25
Charles Emory, wax flowers,	50

For the Committee, MRS. L. B. FISHER.

FINE ARTS.

Miss Ella E. Wright, crayon drawing,	$1 50
C. O. Gott, photographs,	2 00
S. W. Putnam, gratuity, mechanical drawings,	4 00

For the Committee, MYRA B. RICHARDSON.

MANUFACTURED ARTICLES.

Committee award:

J. F. Chaffin, Agent, two Jewett piano-fortes, 1st prem.,	$5 00
S. W. Parker, piano-fortes, 2d prem.,	2 00
C. S. Trask, Wheeler & Wilson sewing machine, 1st prem.,	3 00
Geo. H. Hayes, Singer sewing machine, 2d prem.,	2 00
Dow & Co., stoves,	3 00
Geo. B. Knowlton, stoves, tinware, &c.,	3 00
S. G. Frost, buggy and express wagon,	5 00
Wm. Rice, cider and wine press,	2 00
E. B. Sears, hats, caps and gents' furnishing goods,	3 00
J. A. Russell & Co., clothing,	3 00
J. H. Davenport, S. R. Nye horse-rake,	2 00
Albert Eberhardt, boots,	5 00
C. H. Smith, express wagon,	3 00

For the Committee,

FRANCIS A. WHITNEY, *Chairman.*

ANALYSIS OF PREMIUMS AND GRATUITIES AWARDED.

Amount awarded for:

Horses,	$307 50
Neat Stock,	100 50
Swine,	3 50
Poultry,	14 50
Town Teams,	25 00
Trout,	25 00
Fruits,	67 25
Flowers,	18 00
Vegetables,	17 00
Bread,	7 00
Butter,	11 00
Cheese,	2 00
Manufactured Articles,	41 00
Other Objects,	37 87
Total,	$677 12

The premiums and gratuities awarded to one hundred and fourteen persons, were distributed as follows:

Fitchburg,	$216 87
Worcester,	125 00
Leominster,	95 25
Natick,	75 00
Lunenburg,	50 75
Boston,	50 00
Ashburnham,	27 00
Princeton,	14 00
Oakdale,	3 00
Winchendon,	2 00
Sterling,	1 75
Westminster,	1 50

These premiums and gratuities have been paid.

Jabez Fisher, Treasurer, in account with the Worcester North Agricultural Society.

1873.		*Cr.*
Dec. 11th,	To cash paid J. M. Blanchard, printing,	$3 00
Dec. 12th,	Envelopes and stamps,	9 72
Dec. 15th,	" " "	68
	Wm. H. Hubbard,	8 50
	Garfield & Proctor,	11 55
	S. M. Lovering,	3 00
Dec. 20th,	S. C. W. sending notices of meeting,	3 00
	F. F. Woodward, services to date,	15 00
	Interest on note $3,000 at Savings Bank,	107 55
	Interest on note $7,000 at Savings Bank,	245 00
	On hand,	363 16
		$770 16

1873.		*Dr.*
Nov. 30th,	By balance on hand,	$140 16
Dec. 20th,	Cash, Solon Carter, guarantee fund,	5 00
	E. T. Miles, guarantee fund,	10 00
	Wm. Woodbury, " "	10 00
	E. A. Goodrich, gratuity,	5 00
	By cash of State Treasurer,	600 00
		$770 16

Fr. G. Fessenden, Treasurer, in Account with the Worcester North Agricultural Society.

1873.		*Cr.*
Dec. 20th,	To cash paid F. F. Woodward, salary,	$75 00
Dec. 23d,	Stationery and stamps,	2 60
1874.		
Jan. 2d,	G. F. Maynard's bill,	2 50
Jan. 19th,	Express,	15
Feb. 10th,	Sentinel Printing Co.,	3 50
	Newspaper wrappers,	2 13
Feb. 13th,	Postage and stationery,	2 39
Mar. 24th,	Circulars, (A. Simonds & Co.,)	1 25
Mar. 27th,	Envelopes,	1 12
Mar. 30th,	Postage,	1 00
April 1st,	Premiums,	399 61
April 9th,	Express on State Reports,	60
May 4th,	Postage and wrappers,	2 25
	Fr. G. Fessenden, part salary,	36 50
May 28th,	Interest on note,	107 10
June 15th,	Postage,	39
Sept. 29th,	Services tending gate,	3 00
	G. M. Sawtell, tending gate,	3 00
	J. M. Peck & Co., carriage hire,	17 25
	Stationery, cards, etc.,	12 18
	C. A. Farnum, 1st prize foot race,	3 00
	D. J. Farnum, 2d " " "	2 00
Oct. 1st,	S. E. Coombs, 1st " horse trot,	125 00
	N. T. Dore, 3d " " "	50 00
	Sentinel Printing Co.,	7 50
	S. A. Wheeler & Son, (bill 1871,)	17 29
Oct. 2d,	C. A. Howland, 2d prize, horse trot,	75 00
	Scy West, posting bills,	15 00
	H. F. Piper, printing, (bill 1872,)	12 50
	" " "	66 00
	E. Corey, services at hall 2 days,	6 00
	W. S. Clark, " " " "	10 00
	A. W. Worcester, entrance fee and ½ forfeit,	52 50
	Lyman Patch, entrance fee and ½ forfeit,	52 50
Oct. 3d,	James P. Cobb, services at ground,	2 00
Oct. 5th,	G. B. Knowlton, nails,	48
	A. J. Gleason, services at hall 2 days,	6 00
Oct. 6th,	Prescott Rice, selling tickets,	3 00
	G. Fred Day, selling tickets,	3 00
Oct. 7th,	Horace Wood, weigher,	1 50
Oct. 8th,	Willard Lowe, tending gate,	4 00
	A. P. Goodrich, hay,	7 90

Oct. 9th,	To cash paid David Wallace, work at hall,	$7 00
Oct. 14th,	L. Sprague & Co., use of crockery,	3 15
	Chas. F. Byam, services at grounds,	3 00
	E. L. Caldwell, selling tickets,	3 00
	R. Dow & Co., pumps and fixtures,	20 95
	R. M. Pulsifer & Co., advertising,	13 50
Oct. 22d,	Interest on $3,000 note,	106 42
	" " $7,000 "	251 00
Oct. 24th,	W. S. Smith, labor,	3 50
Oct. 26th,	Timothy Lincoln, premiums 1873,	8 00
Oct. 27th,	L. McMaster, tending gate,	4 00
Nov. 6th,	Samuel Foster, setting glass,	16 20
Nov. 8th,	M. S., clerical services,	2 00
Dec. 1st,	Fr. G. Fessenden, balance of salary,	113 50
	M. S., sending notices of meeting,	2 00
	Sentinel Printing Co.,	2 50
Dec. 2d,	Cash on hand,	224 25
		$1,979 66

		Dr.
1873.		
Dec. 20th,	To amount cash on hand,	$363 16
	Cash of F. F. Woodward, (gift,)	75 00
1874.		
Jan. 6th,	Memberships,	15 00
May 1st,	Cash guarantee fund,	75 00
May 23d,	For use of grounds,	10 00
	Of F. A. Aldrich,	100 00
Sept. 29th,	Gate receipts,	525 00
	Entrance fees horse trot,	125 00
	" " " "	70 00
	" " driving horses,	4 00
Oct. 1st,	Membership fees,	17 50
Oct. 22d,	Of State Treasurer,	600 00
		$1,979 00

PRESIDENTS, ORATORS AND SECRETARIES

OF THE

WORCESTER NORTH AGRICULTURAL SOCIETY.

PRESIDENTS.

1850-1.—ABEL F. ADAMS, Esq., Fitchburg.
1852-3.—Hon. IVERS PHILLIPS, Fitchburg.
1854-5.—Hon. MOSES WOOD, Fitchburg.
1856-7.—THOMAS R. BOUTELLE, M. D., Fitchburg.
1858-9.—Hon. JABEZ FISHER, Fitchburg.
1860-1.—THOMAS BILLINGS, Esq., Lunenburg.
1862-3.—LEWIS H. BRADFORD, Esq., Fitchburg.
1864-5.—Hon. OHIO WHITNEY, Jr., Ashburnham.
1866. —JOSEPH UPTON, Esq., Fitchburg.
1867. —JOSHUA T. EVERETT, Esq., Princeton.
1868. —EUGENE T. MILES, Esq., Fitchburg.
1869. —SAMUEL OSGOOD, Esq., Sterling.
1870. —WILLIAM WOODBURY, Fitchburg.
1871-2.—Hon. JOHN H. LOCKEY, Leominster.
1873. —STEPHEN SHEPLEY, Fitchburg.
1874. —DANIEL C. MILES, Westminster.

ORATORS:

1850.—Hon. CHARLES HUDSON, Lexington,
1852.—THOMAS E. PAYSON, Esq., Rowley.
1853.—Rev. HORATIO STEBBINS, Fitchburg.
1854.—Gov. EMORY WASHBURN, Worcester.
1855.—Hon. NATHANIEL P. BANKS, Waltham.
1856.—CHARLES L. FLINT, Esq., Boston.
1857.—JUSTUS TOWER, Esq., Lanesborough.
1859.—Hon. GEORGE S. BOUTWELL, Groton.
1860.—Hon. GEORGE B. LORING, Salem.
1861.—Hon. A. H. BULLOCK, Worcester.
1862.—Rev. A. N. ARNOLD, D. D., Westboro.
1863.—LUTHER H. TUCKER, Esq., Albany, N. Y.
1867.—GEORGE E. TOWNE, Esq., Fitchburg.

1868.—Hon. DANIEL NEEDHAM, Groton.
1869.—Hon. WILLIAM SPRAGUE, Rhode Island.
1870.—Hon. ALVAH CROCKER, Fitchburg.
1871.—Dr. JAMES R. NICHOLS, Boston.
1872.—Rev. C. W. EMERSON, Fitchburg.

SECRETARIES :

1850–1.—NATHAN UPHAM, Fitchburg.
1852. —JOSEPH PIERCE, Fitchburg.
1853. —CHARLES W. WILDER, Fitchburg.
1854-5.—THOMAS R. BOUTELLE, Fitchburg.
1856–7.—JABEZ FISHER, Fitchburg.
1858–63.—WILLIAM G. WYMAN, Fitchburg.
1864. —LEWIS H. BRADFORD, Fitchburg.
1865–6.—ALVIN M. SAWYER, Fitchburg.
1867-9.—LEWIS H. BRADFORD, Fitchburg.
1870. —WALTER A. EAMES, Fitchburg.
1871–3.—GEORGE S. HOUGHTON, Fitchburg.
1874. —FRANKLIN G. FESSENDEN, Fitchburg,
1875. —EDWARD B. SAWTELL, Fitchburg.

LIFE MEMBERS.

In the following list the Post Office address, when it differs from the residence, is given in *italics* after the name; * indicates that the person has removed, but that the present residence is unknown; † indicates that the person has deceased.

ASHBY.

Brown, C. H.
Burr, John
Damon, Samuel R.
Damon, Ebenezer
Davis, John
Fay, Dennis *Fitchburg.*
Foster, Jesse
Foster, Joseph
Foster, Joel
Gates, Howard
Gates, Paul
Hapgood, Wm. G.
Hayward, Homer J.
Hayward, Joel
Hayward, Paul
Hayward, Samuel
Hayward, John
Hodgman, Luther

Hubbard, Augustus
Hubbard, George B.
Johnson, William
Kendall, George
Lawrence, David †
Smith, Levi
Spencer, Hobart
Wallis, Benjamin
Wallis, B. Frank *Fitchburg.*
Wellington, Liberty
Wright, Charles H.
Wright, Francis W.
Wilder, E. F.
Willard, L. B.

ASHBURNHAM.

Adams, Ivers
Barrell, Nahum
Cummings, John L.
Davis, John C.
Eaton, N. L.
Ellis, Daniels Jr.,
Foster, Jerome W. †
Green, Hosea
Harris, Humphrey *Burrageville,*
Houston, Horace W.
Howard, George
Howe, Addison
Howe, Perley
Marble, Warren
Maynard, Antipas
Merritt, Simeon
Russell, Ward
Russell Franklin
Sampson, George G.
Wallace, Merrick
Wallace, F. W.
Ward, Isaac D.
Ward, Stephen
Whitmore, Alfred †
Whitney, Merrick
Whitney, Ohio
Wilker, John
Wilker, Joseph W.
Willard, Merrick
Winchester, Charles
Winchester, George C.
Woodward, John G.
Whitney, F. A.

BOSTON.

Beal, F. E. L.
Boothby, S. A.
Breck & Sons, Joseph
Comee, William W.
Farwell, Lyman
Haskins, F. W.
Lucas, Edmund G.
Proctor, D. A.
Simonds, Alvan
Tilden, Wm. P.
Whitney, Waldo F.
Whittemore, Belcher & Co.

FITCHBURG.

Aldrich, Lucius
Aldrich, Mrs. Lucius †
Aldrich, Miss Mary M.
American Rattan Company,
Adams, Erastus *
Applin, Mrs. Sophia S.
Bailey, E. Foster
Baldwin, Joseph
Ball, William*
Ball, S. B.*
Barker, Lorenzo
Barker, Mrs. Lorenzo
Bascom, Silas
Battles, Oscar A.
Battles, George T.
Battles, J. Augustus
Billings, Charles J.
Blood, H. A.
Boutelle, David
Boutelle, Frank L.
Boutelle, Mrs. T. R.
Bradford, Lewis H.
Bradford, Mrs. L. H.
Bradford, Miss Anna T.
Brigham, Charles
Brigham, Seth E.
Brown, Mrs. Bessie M.
Brown, Charles H.
Brown, James D.*
Brown, Horace H.

Brown, L. J.
Brown, James *W. Fitchburg.*
Brown, 2d, John F.
Bullock, Laban *
Burnap, Edwin S.
Burnap, Samuel
Buttrick, Francis
Burleigh, Charles
Burney, John
Caldwell, Enoch †
Caldwell, Thomas C.
Carlton, Wm. A.
Carpenter, Daniel M. †
Caswell, Hosea M.
Caswell, Nathan
Caswell, S. Melville
Childs, S. Austin
Choate, John
Coggshall, Henry F.
Comee, Leander P.
Comee, Charles H.
Conn, John A.
Conn, Reuben R.
Colony, George D.
Corey, Jonas
Cotting, William W.
Cowdin, Natt
Crehore, Warren A.
Crocker, Alvah †
Crocker, Daniel P.
Crocker, Charles T.
Cross, Daniel
Cushing, Joseph
Cushing, Mrs. Joseph
Cushing, Charles G.
Cushing, Susan E.
Cushing, Milton M.
Corey, David A.
Damon, Albert
Damon, George
Daniels, Thomas E.
Dadmun, Charles E.
Davis, Alonzo
Davis, Jonathan P.
Davis, Charles
Davis, Elnathan *Auburn.*
Davis, Joel
Day, William F.
Delahanty, Charles J.
Derby, Gilbert H.
Dickinson, Elijah M.
Dickinson, Charles P.
Dole, A. S.
Dole, S. M.
Downe, Mrs. Leonard
Downe, Edward P.
Downe, Mrs. Edward P.
Drew, Wm. B. S. *West F.*
Dyer, Henry B.
Dyke, Joseph
Eager, Wm. L.
Eames, Walter A.
Eaton, Daniel S.
Eaton, Thomas S.
Eddy, B. Webster
Emerson, Alfred *Lancaster.*
Emory, Charles A.
Emory, William C.
Emory, Edward F.
Emory, Sidney P.
Fairbanks, Charles L.
Fairbanks, Lyman N.
Fairbanks, J. H.
Farrar, Gardner
Farwell, Elijah C.
Farwell, Samuel *
Farnsworth, Thomas
Fay, George F.
Fessenden, Charles
Fessenden, Fr. G. *Greenfield.*
Fisher, Jabez
Fisher, Mrs. Jabez
Fisher, J. Frank
Fitchburg, Town of
Freeland, James C. †
Frost, S. Gilman
Frye, George A.
Fuller, Hubbard B.
Fitchburg Novelty Works,
Garfield, J. F. D.
Garfield, John
Gerry, E. J. *
Gill, Thomas H. *
Gilbert, Ivar R.
Gibson, Thomas †
Goodrich, Edwin A.
Goodrich, Henry A.
Goodridge, Alonzo P.

Goodrich, George E.
Goodridge, Herbert D.
Goddard, R. L. *Palmer.*
Goodwin, William H. *West F.*
Gould, William
Gott, Calvin O.
Graves, Howard M.*
Greene, Henry G.
Hadley, Nathan B.
Hale, Samuel
Hannegan, James
Hardy, William A.
Hardon, J. J.
Harris, Gordis D.*
Harris, John M.
Hartwell, Isaac
Haskell, Jacob
Haskell, Miss Lizzie H.
Haskins Machine Co.
Haskins, John F.
Haynes, Stillman
Hayward, E. T.
Hawes, Samuel †
Hawkins, Gardner P.
Henry, Wm. E. & Co.
Heywood, Walter
Heywood, Mrs. Walter
Hitchcock, Alfred †
Hitchcock, Hiland C.
Hogan, Walter W.
Hodges, George L.*
Holmes, Elias
Holman, Silas
Holden, Marquis L.
Hollis, John W.*
Holton, S. S.
Hosmer, Silas
Hosmer, Mrs. Silas
Hosmer, Miss Clara D.
Houghton, Josiah S.
Houghton, Edward L.
Houghton, George S.
Houghton, Mrs. George S.
Jackson, Henry
Jaquith, Caleb W.
Jewett, George
Jefts, Asa S.
Joel, Reuben
Kenney, William F,*
Kendall, Levi
Kimball, John W.
Kimball, A. P.
Kimball Herbert W.*
Kimball, H. J.
Kilgore, John C.
Lawrence, Abram G.
Lawrence, George L.
Lane, Mrs. J. B.
Lewis, Mrs. B. F.
Leathe, William M.
Leverett, James W.*
Litch, Aaron K.
Litchfield, James D.
Livermore, Charles *
Lowe, Henry J.
Lowe, John
Lowe, Willard H.
Lyon, Moses G,
Macy, E. B.
Manning, Elson W.
Manning, Joseph E.
Macurda, W. A. & Co.
Marshall, Alfred A.
Marshall, Abel
Marshall, Jonas A.
Marshall, Joseph A.*
Mason, Charles
Mason, Caroline
McIntire, David
McIntire, Farrington
McIntire, James
Merriam, David H.
Messenger, Daniel
Messenger, Horace P.
Miller, Alfred
Miles, Eugene T.
Miles, Mrs. E. T.
Miles, Miss Hattie E.
Miles, Miss Anstis R.
Miles, Miss Mabel A.
Monroe, Edwin P.
Monroe, Mrs. E. P.
Monroe, James F.
Montjoy, George W.
Moulton, J. C.
Murnane, William

Morse, H. G.
Morse, M. J.
Morse, Herbert O.
Nichols, Lyman
Norcross, Amasa
Nutting, George F.
Page, Hale W. *Kalamazoo, Mich.*
Page, Joel
Page, Mrs. Joel
Page, Herbert E.
Page, Walter F. *
Page, Warren B. *
Palmer, Thomas
Palmer, Mrs. Thomas
Palmer, Miss Mary
Palmer, Joseph
Partridge, H. P. †
Partridge, Asa
Patch, Lyman
Patch, Mrs. Lyman
Patch, Lyman B.
Patch, Arthur
Patch, Walter
Phelps, S. Dennis
Pierce, James
Pierce, Joseph
Pierce, 2d, Joseph
Piper, Joseph L.
Piper, Henry F.
Place, J. D.
Porter, E. C. †
Pratt, Lawrin
Pratt, Silas
Pratt, Willie F. C.
Prichard, John
Pride, William M.
Proctor, George B.
Proctor, George N.
Proctor, Sullivan G.
Proctor, Benjamin F.
Proctor, John B.
Proctor, Mrs. J. B.
Putnam, James P.
Putnam, Frank P.
Putnam, Salmon W. †
Rice, Oran S.
Richardson, Edwin
Richardson, J. B. *
Ripley, Flora B.
Robbins, George
Ruggles, Otis T.
Ruggles, Mrs. Otis T.
Ruggles, Miss Abbie J.
Ruggles, Walter W.
Sabin, John P.
Safford, Benjamin
Sawtell, Charles
Sawtell, Edward B.
Sawtell, Mrs. Edward B.
Sawtell, John M.
Sawyer, Sylvanus
Sawyer, Alvin M.
Sawyer, Asa †
Sawyer, Charles B. *West F.*
Sawyer, Charles K. *West F.*
Saunders, Charles *
Shattuck, Warren W.
Sheldon, Francis
Sheldon, Thomas
Sheldon, Samuel D.
Shepley, Stephen
Shepley, Mrs. Stephen
Shepley, Francis B.
Sherman, Andrew B.
Simonds, Abel *West F.*
Simonds, Joseph F.
Smith, Edward
Smith, John
Smith, Joseph
Smith, William P.
Snow, Peter S.
Snow, C. H. B.
Snow, Benjamin
Snow, Francis H. *
Society, First Universalist
Spaulding, E. G.
Sprague, Leander
Stearns, Varus *
Stickney, George O.
Stiles, James F.
Stiles, Mrs. J. F.
Stoddard, Charles B.
Stockwell, Loriston †
Stone, Norman
Stone, Alanson J. *Lancaster.*
Stevens, Levi *

Stratton, Charles C.
Tenney, Jonathan L.
Thurston, Cyrus
Torrey, Ebenezer
Torrey, Mrs. E.
Towne, George E.
Trees, Thomas †
Tuttle, Lewis G.
Tuttle, D. Waterman
Twichell, John M.
Twichell, Seth
Upham, Nathan
Upton, Harrison
Upton, John
Upton, Mrs. J.
Upton, Edwin
Upton, Thomas
Upton, Warren C.
Vose, William H.
Wallace, Rodney
Ware, Samuel
Ware, T. K.
Ware, Lewis
Warren, L. W. †
Waterhouse, Joseph
Waymoth, A. D.
West, Benjamin W.
West, Clark S.
Weston, S. J. M.
Wetherbee, Alfred
Wheelock, George †
Wheeler, Benjamin
Wheeler, Loring
Wheeler, Lorenzo D.
Wheeler, Samuel A.
Wheelwright, Geo. W. Jr. *
Whitcomb, Nathan
White, W. Fred*
Whitman, Jonathan
Whitman, Augustus, *Leominster.*
Whitman, Ephraim
Whitney, Edwin A.
Whitney, Albert E.
Whittemore, Mrs. B. F. *
Wilder, Charles W. *
Willis, Henry A.
Wilkins, Aaron
Wilson, Timothy S.
Wood, Charles H.
Wood, Mrs. Moses
Wood, Nathaniel
Woodbury, James M.
Woodbury, Miss Maria E.
Woodbury, William
Woodbury, Oscar F.
Works, T. Benton
Works, Edwin D.
Works, George F. *
Wright, J. Q.
Wheeler, John
White, Ivers
Young, Z. F.
Younglove, T.

GARDNER.

Bancroft, Amasa
Bush, C. W.
Greenwood, Calvin S. †
Heywood, Levi
Heywood, Seth
Heywood, Charles
Hill, Edwin
Hill, Henry C.
Hill, John W.
Hubbard, George W. *
Parker, David
Sawin, John *So. Gardner.*
Stevens, S. W. A. *So. Gardner.*
Taylor, Stephen *So. Gardner.*
Wood, Abel S.
Wood, Asaph *So. Gardner.*

HARVARD.

Bull, Trumbull
Burt, George E.
Farmer, Emroy
Fletcher, Sherman
Hosmer, Samuel
Lane, Edwin
Puffer, Josiah *Ayer.*
Taylor, Zopher
Whitney, Hiram
Whitney, Samuel F.
Willard, Alfred R.

LEOMINSTER.

Allen, Joel C.
Arlington Piano Company,
Boutelle, N. C.
Boyden, Elliot E.
Boyden, Charles C.
Bennett, James
Bird, Ebenezer
Burrage, Emory
Burrage, Leonard *North L.*
Burditt, A. L.
Burditt, J. S. †
Buss, John L.
Carter, James H.
Carter, Solon
Carter, George R.
Chase, Henry
Cozzens, Joseph
Colburn, Charles H.
Cotton, Ward M.
Day, N. C. *
Derby, Alden
Derby, Benjamin
Derby, Cephas
Everett, Abram
Field, C. C.
Fuller, William H.
Gates, Augustus
Gates, Edwin
Gates, Whiting
Gates, Jonas W.
Grout, George H.
Harrington, Fred B.
Haskell, Franklin L.
Haws, Manson D.
Hosmer, William B.
Hall, B. F.
Johnson, Ephraim
Johnson, Elbridge
Joslin, Charles L.
Keteridge, Monroe H.
Lincoln, Geo. T.
Lincoln, Timothy
Lockey, John H.
Lockey, John M.
Lyon, A. E.
Marshall, James A.
Marshall, James H.
Marshall, Joseph *North L.*
Merriam, C. H.
Merriam, Gardner
Morse, Augustus *
Moore, Estabrook
Nichols, Edmund H.
Nichols, John F.
Nicholson, Charles R.
Parker, L. W.
Piper, Porter
Putnam & Phelps *North L.*
Rice, George L.
Stratton, Albert
Salisbury, D. W.
Sheldon, G. W.
Snow, Mrs. Nancy *North L.*
Thompson, E. P.
Tilton, Emory
Tisdale, S. A.
Whitney, F. A. Carriage Co.
Woods, George
Woods, Henry A.

LUNENBURG.

Baker, William *Fitchburg.*
Ball, Varnum
Billings, Thomas
Billings, George
Brown, W. L.
Brown, John F.
Brown, Mrs. J. F.
Fairbanks, John
Graham, Ephraim *Fitchburg.*
Goodrich, Joseph
Gilchrist, George S.
Heath, Mahon S.
Houghton, Edmund
Johnson, Martin
Kilburn, Cyrus
Kilburn, Mrs. Cyrus
Page, Luther
Pitts, Lemuel *
Putnam, James
Putnam, Daniel
Stone, Eliphalet
Stone, Mrs. J. E.
Stone, Stillman

Whitney, Aaron P.
White, Levi

PRINCETON.

Benson, W. W.
Beaman, Winslow E. *East P.*
Brooks, John
Brown, W. H. *East P.*
Danforth, Nathan *
Everett, J. T. *East P.*
Gill, Emery W.
Gregory, George M.
Hastings, Solon S.
Houghton, George W.
Merriam, J. Edwin
Mirick, Sewall G.
Mirick, Moses H. *East P.*
Mirick, Paul M. *East P.*
Reed, Nathan B.
Richardson, Sewall
Roper, John
Roper, Wilkes
Skinner, George O.
Skinner, Harlow
Thompson, A. G.
Temple, Jonas H. *East P.*
Whitcomb, Joseph *East P.*
Wilder, Mark *East P.*

ROYALSTON.

Bemis, Otis *South R.*
Clark, Edson
Clark, Timothy
Farrar, S. S. *South R.*
Hale, John W. *South R.*
Hale, Silas *South R.*
Jones, Aaron *South R.*
Jones, Silas *South R.*
Perkins, Joseph L.
Raymond, Joseph
Safford, Roby R. *South R.*
Stockwell, Anan *South R.*
Turner, Ephraim *South R.*

SHIRLEY.

Davis, George
Edgarton, Charles A. *S. Vill.*
Gardner, Jerome B. *S. Vill.*
Gardner, M. T. *S. Vill.*
Hartwell, Nathaniel
Hazen, Thomas L. *S. Vill.*
Hazen, Jacob P. *S. Village.*
Munson, Norman C. "
Page, George "
Parker, James O. "
Sanderson, George W. "
Whetherbee, Wm. H. "
Whitney, Thomas E. "

STERLING.

Barron, A. S.
Baldwin, William
Burpee, Edward
Fitch, Charles B.
Flagg, Charles
Hastings, Rufus
Heywood, H. Marcellus
Heywood, Moses B.
Kendall, Ezra
Kendall, George
Loring, Chandler H.
Loring, Maynard
Nourse, Franklin
Osgood, Samuel
Peck, W. D.
Richardson, William B.
Stephenson, John M.
Sawyer, Jonathan M.
Sawyer, Putnam
Sawyer, William H.
Smith, Sidney
Whitney, Joseph

TEMPLETON.

Day, Gilman *Baldwinville.*
Goldsmith, J. G. *Otter River.*
Sawyer, Edwin *Baldwinville.*
Sawyer, James *East Templeton.*
Simonds, Warren

Smith, Levi N. *Baldwinville.*
Stone, E. W. *Otter River.*

WESTMINSTER.

Bacon, Edward
Barnes, Adonijah
Benjamin, A. W. *Wachusett Vill.*
Benson, Bigelow
Brown, Timothy *Wachusett Vill.*
Carter, Russell O.
Carter, E. R.
Chesmore, Reuben G. *Fitchburg.*
Divol, Luke
Duncan, Geo. N. *Fitchburg.*
Ellis, Preston
Flagg, Otis
Forbush, Joseph W. *
Hagar, Isaac *
Holden, Amos B.
Laws, David *Ashburnham.*
Laws, James H.
Leonard, John K.
Merriam, Artemas
Merriam, Caleb S.
Merriam, Joel †
Minot, John
Miller, Joseph *
Miles, George †
Miles, Daniel C.
Miles, Daniel *Wachusett Vill.*
Miles, Herbert J.
North, Daniel
Page, Josiah *West F.*
Page, Porter F. *West F.*
Puffer, James
Raymond, Asa
Raymond, Eli W.
Raymond, Aretas †
Sprague, S. H. *Wachusett Vill.*
Towne, George W. *
Waterhouse, Joseph
Whitney, Calvin
White, Marshall
Winship, Handell
Winship, Sylvester
Wood, Aaron
Wood, Benjamin F.
Wood, Timothy D.
Wood, T. S.
Wood, Allen B. *Fitchburg.*
Wyman, Benj. *Wachusett Vill.*
Wyman, Franklin *Wachusett V.*
Wyman, David *

WINCHENDON.

Brown, 2d, William
Cutter, John
Folsom, John G.
Forristal, John M.
Mason, Orlando
Murdock, Ephraim Jr.
Raymond, Paul Jr.
Whitney, Giles H.
Vose, Reuben Jr.

WORCESTER.

Beaman, G. S.
Bullock, Alexander H.
Boyington, John
Brown, Alzirus
Barnard, A. B.
Chase, Anthony
Howard, Justin
Harris, Gideon
Miles, Charles M.
Phillips, Ivers
Richardson, George W.
Spooner, A. J.
Wellington, Timothy W.
Wheeler, W. A.
Whitcomb, David

MISCELLANEOUS.

Martin Clifford, Amherst; George Chandler, Acton; William S. Merritt, Ashfield; Francis Conant, Boxboro'; J. H. Reed, J. Forbush, Bolton; R. S. Denney, Clappville; William A. Mandell, Cambridge; Washington Nichols, Charlestown; Amory Davidson, Clinton; Rodney Fuller, Dracut; Eli A. Hubbard, Easthampton; Henry G. White, Framingham; Hazen O. Bean, Groton; Charles L. Nutting, Groton; Nath'l Holden, A. L. Lawton, Groton Junc.; M. L. May, Hubbardston; Alpheus B. Davis, Holland; Ebenezer Bullard, Hampstead, N. H.; J. A. Harwood, J. H. Whitcomb, Adam Thompson, Littleton; Albert Merriam, Lowell; John W. Piper, Lynn; Samuel Farwell, 2d, Fitchburg; John F. Ware, Milton; A. O. Cummings, Israel Everett, A. C. & J. G. Wood, Millbury; Daniel W. Blood, Pepperell; Enward Powers, Phillipston; John A. Rice, Quincy; Henry B. Jones, Townsend; Asher Green, Mrs. Asher Green, Abram M. White, West Townsend; Stephen Stanton, Wayland; Martin Harris, Warwick; L. H. Rice, West Boylston; E. W. Houghton, Still River; A. H. Brick, Waterbury, Vt.; James O. Kendall, Hartford, Wis.; Luther H. Tucker, Albany, N. Y.; Henry F. Kenney, Philadelphia, Pa.; H. W. Collin, Burlington, Vt.; Joel Foskett, Camden, N. Y.; Elisha Garfield, † Horatio Hill, Israel Longley, Chicago, Ill.; Milton Frost, Detriot, Mich.; J. T. Densmore, Charleston, N. H.; Nathan Whitney, Claremont, N. H.; Hiram W. Albee, Ludlow, Vt.; Artemas F. Andrews, Geo. M. Gage, North Ipswich, N. H.; Solomon P. Burpee, J. M. Stuart, William B. Wood, New York City; Gilman Jones, N. Buffalo, Mich.; Kendall Brooks, Joseph W. Mansur, Kalamazoo, Mich.; Oliver Howe, Titusville Pa.; James L. Haynes, Peru, Vt.; Solomon F. Towne, Rindge, N. H.; Frank M. Proctor, Westmoreland, N. H.; Henry R. Phelps, Syracuse, N. Y.; Bailey, Cook & Co., Woonsocket, R.I.; William G. Wyman, Maine Prairie, Cal.; Thomas B. Choate, Stockton, Cal.; Horatio Stebbins, San Francisco, Cal.; Henry W. Haskell, Marysville, Cal.; Jacob Brown, Maysville, Mo.; James Houghton, Oakdale; Jones & Perkins, Wilton, N. H.

COMMITTEES AND PREMIUMS

FOR THE

TWENTY-THIRD ANNUAL EXHIBITION,

TO BE HELD AT FITCHBURG,

TUESDAY, SEPTEMBER 28th, 1875.

No person will be allowed to become a competitor for any of the Premiums herein offered, unless he shall have made an entry for the same, with the Secretary, within the time prescribed for each class, nor unless he shall have furnished all required statements relating thereto, within the specified time.

For the convenience of those who live at a distance, entries may be made by mail; and all entries so made must be delivered at some post-office one day previous to the expiration of the time specified, and must bear proof of having been so delivered, either by postmark, or a certificate of registry from the postmaster.

☞ Communications for the Secretary, should be sent to Fitchburg.

STOCK.

All entries for premiums under this head, must be made on or before the Friday previous to the Show, except Horses and Poultry, which may be as late as the Monday previous.

All persons who are required to furnish a statement, must do so to the Secretary, at the time of making the entry, and he shall post copies on the day of exhibition.

All live stock must be owned by the person entering the same.

Each entry of stock for the pens must specify the breed of the animal, if known, and the age.

Fat cattle and working cattle must be weighed on the scales on the grounds of the Society, and a certificate furnished the Secretary.

The weight of all other stock will not be required.

All stock, except oxen shown only in Town Teams, taken from the grounds before 4 o'clock P. M., on Tuesday, without permission of the President, shall forfeit all premiums that may have been awarded to it.

The committees on Neat Stock, Sheep, Swine and Poultry, shall make their awards previous to 3 o'clock P. M., on Tuesday. They shall designate the premiums immediately with printed ribbons or cards, blue for first, red for second, and white for third.

The Society will provide good hay for all Stock entered for premium or exhibition during the time of the Show, and will furnish grain at cost, to all who may require it.

Hereafter, the best animals exhibited shall be entitled to the premiums, without regard to former awards.

Committee in charge of Grounds.—D. C. Miles, Westminster; J. M. Sawtell, Joseph Cushing, Fitchburg.

Committee on Pedigrees.—E. T. Miles, Joel Page, Fitchburg; Augustus Whitman, Leominster.

Committee on Animals for Exhibition, with authority to recommend gratuities.—E. D. Works, of Fitchburg.

Committee on Forage—A. P. Goodridge, Fitchburg.

Committee on Finance.—D. C. Miles, Westminster.

THOROUGH-BRED STOCK.

Committee.—Joel Page, Edwin D. Works, Fitchburg; John H. Lockey, Leominster.

SHORTHORNS, AYRSHIRES, JERSEYS, DEVONS, OR OTHER THOROUGH-BRED STOCK.

Herds consisting of one bull and not less than four females, all one year old and upwards, and owned by the competitor for four months preceding the show. Two premiums: $6, 4.

BULLS.

Two years old and upwards. Two premiums: $5, 3.
One year old and under two. Two premiums: $4, 2.
Calves (under one year). Two premiums: $4, 2.

COWS.

Four years old and upwards. Two premiums: $3, 2.
Three years old and under four. Two premiums: $2.50, 1.50.
Two years old and under three. Two premiums: $2, 1.
One year old and under two. Two premiums: $1.50, 1.
Calves (under one year). Two premiums: $1.50, 1.

Competitors may make such statements to the Committee as they please, all of which shall be considered.

STOCK NOT THOROUGH-BRED.

Thorough-bred Stock may compete in the following classes, but shall have no advantage on account of blood or pedigree.

MILCH KINE.

Committee.—Stillman Stone, Lunenburg; Cecil Heywood, Ashby; George Grout, Leominster.

Herds of four cows or heifers, each. Two premiums: $5, 3,50

The committee will regard age, expense of keeping, &c.

Cows for butter. Two premiums: $2.50, 2.
Heifers, three years old, for butter. Two premiums: $2.50, 2.
Heifers, two years old, for butter. Two premiums: $2, 1.50.

Cows, for milk. Two premiums: $2.50, 2.
Heifers, three years old, for milk. Two premiums: $2.50, 2.
Heifers, two years old, for milk. Two premiums: $2, 1.50.

Competitors may make such statements to the Committee as they please, all of which shall be considered.

HEIFERS AND HEIFER CALVES.

Committee.—Theodore Wood, W. B. Osborn, Leominster; Asia Jeffts, Fitchburg.

Intended to be kept for the Dairy.

Two years old. Two premiums: $2, 1.50.
Yearlings. Two premiums: $1.50, 1.
Calves more than four months old. Two premiums: $2, 1.50.
Calves more than four months old, raised by hand. Two premiums: $2, 1.50.

Persons exhibiting calves raised by hand, shall furnish statements to the Secretary, of the manner of raising.

YEARLING STEERS, STEER CALVES AND PENS OF CALVES.

Committee.—Abel Marshall, Daniel S. Eaton, Fitchburg; Augustus Gates, Leominster.

Yearlings. Two premiums: $1.50, 1.
Trained Yearlings. Two premiums: $1.50, 1.
Calves. Two premiums: $3, 2.
Calves raised by hand. Two premiums: $3, 2.
Trained Calves. Two premiums: $2, 1.50.
Best Minor Trainers. Two premiums: $1.50, 1.
Best pen of Calves, not less than four. Two premiums: $5, 2,50.

Persons exhibiting Calves raised by hand, shall furnish a statement to the Secretary, of the manner of raising.

Calves entered in Pens of Calves cannot compete for premiums as single animals.

WORKING OXEN AND STEERS.

Committee.—A. B. Davis, Clinton; William Woodbury, Fitchburg; George Woods, Leominster.

Working Oxen. Two premiums: $5, 3.
Best Minor Teamsters. Two premiums: $2.50, 1.50.
Steers, three years old. Two premiums: $2.50, 2.
Best Minor Teamster. Two premiums: $2, 1.
Two years old. Two premiums: $2, 1.50.
Trained two years old. Two premiums: $2, 1.
Best Minor Trainers. Two premiums: $1.50, 1.

The Working Oxen will be tried attached to loads weighing, including the cart, one-third more than themselves.

The three years old steers will be attached to carts, and tried like the oxen on the same ground; the cart and load to equal the steers in weight.

FAT CATTLE.

Committee.—John Lowe, Fitchburg; E. R. Carter, Westminster; Cephas Derby, Leominster.

Best Fat Ox. Two premiums: $4, 2.50.
Best Fat Cow. Two premiums: $3, 1.50.
Best Fat Steer or Heifer. Two premiums: $3, 2.

All competitors with fat cattle, must furnish a statement to the Secretary, of the mode and expense of feeding.

SWINE.

Committee.—Joseph Cushing, Fitchburg; C. C. Boyden, Leominster; Marshall White, Westminster.

Must be entered like other stock.

Boars more than one year old. Two premiums: $2, 1.50.
Less than one year old. Two premiums: $1.50, 1.
Best Fat Hogs, having regard to age. Two premiums: $4, 2.
Fat Pigs, less than eight months old. Two premiums: $2, 1.
Breeding Sows. Two premiums: $4, 2.
Weaned Pigs, not less than four. Two premiums: $2, 1.

All Swine, and each litter of Pigs, will be allowed fifteen cents mileage for each mile more than two that they are brought.

POULTRY.

Committee.—Geo. F. Williams, Lunenburg; Jabez Fisher, Horace E. Wheeler, Fitchburg.

Must be entered like other stock.

Barn-yard fowls, not less than a trio.

Brahmas. Two premiums: $1, .50.
Black Spanish. Two premiums: $1, .50.
White Leghorns. Two premiums: $1, .50.
Any other breed. Two premiums: $1, .50.
Turkeys, not less than a trio. Two premiums: $1.50, 1.
Geese, not less than a trio. Two premiums: $1.50, 1.
Ducks, not less than a trio. Two premiums: $1.50, 1.

TOWN TEAMS.

Committee.—Solon Carter, Leominster; Reuben Vose, Winchendon; Abel Marshall, Fitchburg.

Best Town Teams, not less than fifteen yoke from any one town.
Two premiums: $15, 10.
These teams may consist of either oxen or steers, or both.

HORSES.

Entries for all horses where entrance fee is required to be paid, must be made before 9 o'clock A. M. of the day on which they are exhibited.

GENTLEMEN'S DRIVING HORSES—SINGLE.

Committee.—E. T. Miles, Fitchburg; F. W. Wright, Ashby; John H. Lockey, Leominster.

Gentlemen's Driving Horses. Four premiums: $6, 4, 3, 2.
Entrance fee, $1.
Speed considered, but not to govern.

In the trial of horses in this class, they shall make a standing start from the Judges' stand.

MATCHED DRIVING AND FAMILY HORSES.

Committee.—Geo. F. Fay, Lyman Patch, Fitchburg; L. N. Smith, Baldwinville.

Matched Driving Horses. Four premiums: $6, 4, 3, 2.
Family Horses—Single. Four premiums: $6, 4, 3, 2.
Entrance fee, $1.

COLTS.

Committee.—Charles H. Brown, Fitchburg; N. B. Reed, Princeton; James H. Marshall, Leominster.

Stallions, three years old. Two premiums: $5, 2.50.
Geldings, three years old. Two premiums: $5, 2.50.
Fillies, three years old. Two premiums: $5, 2.50.
Stallions or Geldings, two years old. Two premiums: $3, 1.50.
Fillies, two years old. Two premiums: $3, 1.50.
Yearling Colts. Two premiums: $2.50, 1.50.

STALLIONS, MARES AND SUCKING COLTS.

Committee.—Ohio Whitney, Ashburnham; Warren Simonds, Baldwinville; S. W. A. Stevens, South Gardner.

Best Stallions for general use, four years old and upwards. Two premiums: $10, 5.
Breeding Mares. Two premiums: $4, 2.50.
Colts less than one year old. Two premiums: $2, 1.50.

The Mares must be four years old and upwards, and accompanied by their Colts.

No premium shall be awarded to a mare known to be unsound.

PLOUGHING MATCHES.

All entries for ploughing must be on or before the Friday previous to the Exhibition, and one dollar must be deposited with each entry, to be returned to the competitor if he ploughs, otherwise forfeited to the Society. The swivel plough only will be allowed.

HORSE TEAMS.

Committee.—Stephen Shepley, Fitchburg; Edward Bacon, Westminster; Joel Foster, Ashby.

Two premiums: $5, 3.

OX TEAMS.

Committee.—Wm. B. Hosmer, Leominster; Thomas Sheldon, Fitchburg; Wm. W. Benson, Princeton.

Two premiums: $5, 3.

CROPS.

All entries for premiums in this department must be made with the Secretary, on or before June 15th, with the exception of English turnips and cabbages, which must be entered on or before August 15. Immediately after these dates, the Secretary will transmit to all competitors a blank form, adopted by the Trustees, to correspond with the requirements of the Board of Agriculture.

GRAIN.

Committee.—Cyrus Kilburn, Lunenburg: Abel Marshall, Fitchburg; Caleb S. Merriam, Westminster.

The committee may award gratuities for valuable new varieties of grain.

For the most profitable crops of corn, wheat, rye, barley and oats, one acre each; of cabbages, beans and flax, one-eight acre each; the product of corn to be not less than 4,320 lbs. on the cob; that of wheat, rye, barley and oats, not less than 1,000 lbs. of grain each:

Corn. Two premiums: $5, 4.
Wheat. Two premiums: $5, 4.
Rye. Two premiums: $2, 1.
Barley. Two premiums: $2, 1.
Oats. Two premiums: $2, 1.
Field Beans. Two premiums: $1, .50.

Samples must be exhibited at the Fair.

ROOT CROPS AND CABBAGES.

Committee.—Alden Derby, Leominster; Benjamin Safford, Fitchburg; Martin Johnson, Lunenburg.

For the most profitable crops of potatoes, one-fourth acre each; of carrots, onions, beets and turnips, one-eight acre each:

Potatoes, not less than 3,000 lbs. Two premiums: $4, 2.50.
Carrots, not less than 5,500 lbs. Two premiums: $2, 1.50,
Onions, not less than 2,000 lbs. Two premiums: $1.50, 1.
Sugar Beets. Two premiums: $1, .50.
Mangel Wurzel. Two premiums: $1, .50.
English Turnips. Two premiums: $1.50, 1.
Turnips of any other variety. Two premiums: $1.50, 1.
Cabbages. Two premiums: $1, .50.

EXHIBITION AT THE HALL.

No article intended for the Hall will be entitled to a premium unless it shall have been deposited by 2 o'clock P. M., on Monday.

All articles should be plainly marked with the name and residence of the exhibitor, except samples of Bread and Butter, which must be designated by numbers. A strict compliance with these regulations will be absolutely necessary to entitle competitors to any premiums that may be awarded to them.

APPLES, PEACHES, PLUMS AND QUINCES.

Committee.—Jabez Fisher, George Jewett, Fitchburg; Porter Piper, Leominster.

APPLES.

Twelve varieties of five specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: $2, 1.50.
Three varieties of five specimens each. Two premiums: $1.50, 1.
Best exhibition of twelve specimens of Baldwins. Two premiums: $1, .50.
Hubbardston Nonesuch. Two premiums: $1, .50.
R. I. Greenings. Two premiums: $1, .50.
Roxbury Russets. Two premiums: $1, .50.
Gravensteins. Two premiums: $1, .50.
Palmer Greenings. Two premiums: $1, .50.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

PEACHES.

Best collection. One premium: $3.
Best dishes or baskets. Two premiums: $2, 1.

PLUMS.

Best collection. One premium: $2.
Best plates. Two premiums: $1, .50.

QUINCES.

Best dishes or baskets. Two premiums: $1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

PEARS AND GRAPES.

Committee.—Rodney Wallace, Fitchburg; Ohio Whitney, Ashburnham; Estabrook Moore, Leominster.

PEARS.

Twelve varieties of five specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: $2, 1.50.
Three varieties of five specimens each. Two premiums: $1.50, 1.
Best exhibition of twelve specimens of Bartletts. Two premiums: $1, .50.
Seckel. Two premiums: $1, .50.
Flemish Beauty. Two premiums: $1, .50.
Duchess. Two premiums: $1, .50.
Louise Bonnie de Jersey. Two premiums: $1, .50.
Lawrence. Two premiums: $1, .50.
Beurre d'Anjou. Two premiums: $1, .50.
Sheldon. Two premiums: $1, .50.

GRAPES.

Best displays of varieties of Native Grapes. Two premiums: $5, 3.
Best six clusters Concord. Two premiums: $1, .50.
Best six clusters Delaware. Two premiums: $1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

ASSORTED FRUITS AND FLOWERS.

Committee.—Miss Alice Shepley, Miss Hattie E. Miles, Fitchburg; Mrs. George Whittemore, Lunenburg.

ASSORTED FRUITS.

Best Dishes or Baskets. Two premiums: $2, 1.

PLANTS IN POTS.

Best displays of named Plants in Pots. Two premiums: $2, 1.
Best three named Plants in Pots. Two premiums: $2, 1.

CUT FLOWERS.

Best displays of Cut Flowers. Two premiums: $2, 1.
Best five named Asters. Two premiums: $2, 1.
Best five named Dahlias. Two premiums: $2, 1.
Best five named Verbenas. Two premiums: $2, 1.
Best pair of Parlor Bouquets. Two premiums: $2, 1.
Best pair of Hand Bouquets. Two premiums: $2, 1.

The best plants in pots cannot compete for both the best display and the best three; nor can the same Asters, Dahlias or Verbenas, compete for the best display and the best five.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

VEGETABLES.

Committee.—John B. Proctor, Thomas Upton, Fitchburg; Fred B. Harrington, Leominster.

Best collections Kitchen Vegetables. Two premiums: $4, 3.
Collections of Potatoes. Two premiums: $2, 1.
Marrow Squashes. Two premiums: $1, .50.
Hubbard Squashes. Two premiums: 1, .50.
Crookneck Squashes. Two premiums: $1, .50.
Pumpkins. Two premiums: .75, .50.
Cabbages. Two premiums: 75, .50.
Cauliflowers. Two premiums: .75, .50.
Celery. Two premiums: .75, .50.
Onions. Two premiums: .75, .50.
Turnip Beets. Two premiums: .75, .50.
English Turnips. Two premiums: .50, .25.
Tomatoes. Two premiums: .50, .25.
Field Beans. Two premiums: .50, .25.
Lima Beans. Two premiums: .50, .25.
Seed Corn, in traces. Two premiums: $1, .75.

The committee will regard perfection of growth and quality, and not size.

In addition to the above, there will be allowed, for gratuities, ten dollars.

Of squashes, pumpkins, cabbages and celery, there should be six specimens in each lot; of cauliflowers, three; of onions, beets, turnips and tomatoes, one peck in each lot; of field beans, one-half peck; and of Lima beans, two quarts.

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES AND JELLIES.

Committee.—Mrs. E. T. Miles, Fitchburg; Mrs. Charles C. Boyden, Leominster; Mrs. F. W. Wright, Ashby.

Bread made by the exhibitor.
White Bread. Three premiums: $2, 1, .50.
Unbolted Wheat Bread. Three premiums: $2, 1, .50.
Bolted Rye Bread. Three premiums: $2, 1, .50.
Rye and Indian Bread. Three premiums: $2, 1, .50.

BUTTER AND CHEESE.

Lump Butter, not less than 12 lbs. Two premiums: $4, 3.
June Tub Butter, not less than 25 lbs. Two premiums: $3, 2.
Sept. " " " " " " " Two premiums: $3, 2.
Cheese, not less than 50 lbs. Two premiums: $2, 1.50.

PICKLES AND HONEY.

Pickles. Two premiums: $1, .50.
Virgin Honey in the Comb. Three premiums: $2, 1, .50.
Canned Fruits, best collections. Two premiums: $2, 1.

In addition to the above, there will be allowed for gratuities, ten dollars.

Competitors will be required to furnish to the Secretary, a detailed statement in writing, of the process of manufacturing butter, cheese and pickles; and no others shall be considered.

MANUFACTURED ARTICLES.

Committee.—John Q. Wright, Fitchburg; Charles L. Joslin, Leominster; Artemas Merriam, Westminster.

Specimens exhibited must be manufactured by the competitor.

For the best specimens of manufactured articles, exclusive of ladies' home manufacture, actually produced by the exhibitor, there will be placed at the disposal of the committee, the sum of one hundred dollars.

For the best exhibition of manufactured articles, not actually the product of the exhibitor, there will be placed at the disposal of the committee, the sum of fifty dollars.

FINE ARTS.

Committee.—Miss Myra B. Richardson, Fitchburg; Miss M. J. Miles, Westminster; Miss Ella Norcross, Fitchburg.

Best collections by a Photographic Artist. Two premiums: $2, 1.
Oil Paintings. Two premiums: $2, 1.
Best Crayon Drawings. Two premiums: $1.50, 1.
Pencil Drawings. Two premiums: $1, .50.
Best specimen of Penmanship by a non-professional. One premium: $ .50.

In addition there will be placed at the disposal of the committee, for gratuities, the sum of ten dollars.

Specimens exhibited must be actually executed by the competitor.

FANCY ARTICLES.

Committee.—Mrs. Jabez Fisher, Miss Louise M. Haskell, Mrs. L. H. Bradford, Fitchburg.

For the best specimens of Ladies' Useful and Fancy Articles of their own manufacture, including specimens of nice mending and darning, there will placed at the disposal of the committee, the sum of thirty dollars.

COMMITTEES' REPORTS.

Committee.—The President, Vice Presidents and Secretary.

For the purpose of inducing the chairmen of the several committees to take upon themselves more labor and care in elaborating their reports, the following premiums will be paid: $10, 6, 4.

Detailed reports in connection with awards (except on Grain and Root Crops), must be delivered to the Secretary on or before November 1st.

PROSPECTIVE EXPERIMENTS.

FOREST TREES.

Committee.—W. B. Hosmer, George Merriam, Leominster; J. P. Putnam, Fitchburg.

For the best plantation of any kind of Forest Trees, suitable for fuel or timber, raised from the seed, not less than five hundred in number, which shall be in the most flourishing condition in the fall of 1876. Two premiums: $15, 10.

Entries must be made on or before the first day of June.

COMMITTEE OF ARRANGEMENTS.

D. C. MILES, Westminster.
J. M. SAWTELL, Fitchburg.
C. C. BOYDEN, Leominster.
EDWARD B. SAWTELL, Fitchburg.
F. F. WOODWARD, Fitchburg.

RULES.

All teams entered for draught must be owned by the person entering the same.

Any person competing for a premium, who shall serve on the committee having charge of the department in which he competes, shall retire from the committee while his own competition is in question.

The several committees will not consider themselves bound by the terms of the above offers, to award a premium for anything which they shall deem inferior.

Any person to whom a premium shall have been awarded, in consequence of any deception or misrepresentation used by him, shall not only forfeit such premium, but afterward be incapable of competing for the Society's premiums.

All persons, not members of the Society, to whom may be awarded a premium, or premiums, amounting to five dollars or upward, shall receive a certificate of membership for five dollars, and the balance in cash. If the amount shall be less than five dollars, a deduction of fifty per cent. will be made, unless the individual chooses to make the amount up to that sum, and receive a certificate of membership.

All premiums not demanded on or before December 25th, will revert to the Society.

OFFICERS OF THE SOCIETY FOR 1875,

Elected at the Annual Meeting, December 2d, 1874.

D. C. MILES, of Westminster, *President.*

J. M. SAWTELL, of Fitchburg, } *Vice Presidents.*
C. C. BOYDEN, of Leominster, }

EDW. B. SAWTELL, of Fitchburg, *Sec'y and Treasurer.*

TRUSTEES.

O. WHITNEY, Ashburnham,	REUBEN VOSE, Winchendon.
JOEL HAYWARD, Ashby,	JOSEPH CUSHING, Fitchburg.
CECIL F. HAYWARD, Ashby,	JABEZ FISHER, "
S. W. A. STEVENS, Gardner,	ABEL MARSHALL, "
S. F. WHITNEY, Harvard,	JOEL PAGE, "
W. B. HOSMER, Leominster,	LYMAN PATCH, "
F. W. WHITNEY, "	E. T. MILES, "
CYRUS KILBURN, Lunenburg,	WM. WOODBURY, "
J. F. BROWN, "	CHAS. BRIGHAM, "
ALFRED WHITING, Oakdale,	E. D. WORKS, "
N. B. REED, Princeton,	JOHN F. HASKINS, "
A. STOCKWELL, Royalston,	CHAS. FESSENDEN, "
J. O. PARKER, Shirley,	J. Q. WRIGHT, "
F. NOURSE, Sterling,	L. ALDRICH, "
W. SIMONDS, Templeton,	STEPHEN SHEPLEY, "
EDWARD BACON, Westminster,	F. F. WOODWARD, "

STEPHEN SHEPLEY, of Fitchburg, elected *Member of the State Board of Agriculture*, December 2d, 1874, for three years.

TRANSACTIONS

OF THE

WORCESTER NORTH

AGRICULTURAL SOCIETY,

FOR THE YEAR 1875,

TOGETHER WITH A LIST OF THE

COMMITTEES AND PREMIUMS FOR 1876.

FITCHBURG:
PRINTED AT THE OFFICE OF J. L. PIPER, DAY STREET,
1875.

SECRETARY'S REPORT.

The Twenty-third Annual Exhibition was held on the grounds of the Society, on Tuesday, September 28th.

The weather—always a matter of the first consideration in Agricultural Exhibitions and reports—added largely to the number of false prophets, and veterans of many Cattle Shows relying upon the unvarying experience of many years, were suddenly stripped of their hard-earned reputation for periodical wisdom, by as pleasant a day as the most earnest friend of the Society could desire.

At 9 o'clock, and first in the order of exercises, was the ploughing match, revived after several years neglect, and it is desirable that it be continued annually hereafter, if the creditable performance of this year is to be the standard. This was followed by the trials of working oxen and steers, which proved worthily interesting, both from the large number of entries and the skill displayed in the management of the teams. The exhibitions of gentlemen's driving horses, family horses and matched driving horses, were of the usual degree of excellence, and that of town teams was good, but that it was so small is far from creditable to Worcester North. No society in the Commonwealth can excel the display that can be made in this branch by the farmers and stock raisers of this part of Worcester County, if only a respectable degree of interest be manifested.

His Excellency, Governor Gaston, arrived on the grounds at about 1 o'clock, and soon after a procession was formed and marched to the hall, where dinner was served, after an invocation of the Divine blessing by the Rev. I. R. Wheelock. The more pressing material demands were fully supplied by

caterer Dana L. Fuller, and after the tables were cleared, President Miles called the assembly to order, and congratulated the Society upon the success of the exhibition. A quartette composed of Messrs. Bailey, Clark, Mather and Thurston, followed with a song, and the hearty applause of the audience showed their appreciation of good music. The President then introduced His Excellency, the Governor, who delivered a pertinent and practical address upon the importance of Agricultural Societies and Exhibitions. President Chadbourne of Williams College, delegate from the State Board of Agriculture, next spoke pleasantly and profitably upon the value of the farming interests of New England, and compared the agriculture of olden times with that of the present. Col. Ivers Phillips, the first President of the Society, followed with congratulatory remarks, and His Honor, Mayor Miles, spoke briefly of the success of the day and hopefully of the future of the Society, and closed by extending a cordial invitation to all to meet the Governor at his house in the evening.

In the various departments the Exhibition was interesting, and especially in the show of neat stock was superior as usual. Among the entries of Thorough-breds, were the Ayrshires of Mayor Miles, the Jerseys of J. F. Brown of Lunenburg, the Devons of N. B. Reed of Princeton, and single animals by Joel Page and William Burke of Fitchburg, and T. S. Wood of Westminster. The herd of Durhams of Messrs. A. & E. Whitman, entered for exhibition only, was as usual, of the highest merit. Entries of milch kine were more numerous than usual, and among others was noticeable the stock of Stillman Stone of Lunenburg, N. B. Reed of Princeton, Liberty Wellington of Ashby, Stephen Shepley, Edwin Richardson and A. B. Damon of Fitchburg. The display of fat cattle was better than for several years past, and the class of working oxen and steers was well filled. The show of poultry has never been equaled at any previous exhibition of the Society, and was not surpassed by any in New England during the present year. Entries of horses were numerous and satisfactory, and the show of swine was much superior to that of last year. In the Hall, the entries showed a large increase over last year, especially in the department of manufactured articles, which was very well filled, and that of fine arts.

In the afternoon, came a very successful exhibition of trotting horses for premiums offered by the Society. The entries were confined to animals owned by members of the Society, and the interest in this portion of the exercises was manifestly increased by this limitation. The "Horse Trot" has now come to be recognized as an indispensable part of the programme of Agricultural Exhibitions, and the statement in the report of last year that "no Agricultural Society in New England has been without its horse trot the present season" may be repeated this year, although a few societies still oppose what was at first considered an unwarranted innovation. The amount of premiums, according to the last State report, awarded and paid out by the Agricultural Societies of Massachusetts to trotting horses exceeded in amount the premiums paid out in any other department except live stock, and of the thirty-one societies in the state, twenty-three awarded and paid out over twelve thousand dollars.

Premiums were also offered for horses driven by ladies and skill in horsemanship, with very satisfactory results; and a fine exhibition of the national game by the Rollstones of this city and the Lowells of Lowell, was one of the chief attractions of the day.

The exhibition this year was in every particular a decided success. This result is to be attributed to the interest shown by the citizens of Fitchburg and the members of the Society, the reduced price of admission, and the pleasant weather. For the first, the Society is largely indebted to the efforts made by the Board of Trade of Fitchburg. By means of frequent discussions of the Society's affairs at the monthly meetings of the Board, and the interest excited by the influence of its members, the "Worcester North" has again taken its place among the living institutions of the city, and it is certain that future exhibitions will be more successful than the last one, if only this renewed interest is maintained.

Much of the success of an exhibition of this nature depends upon the promptness with which the various parts of the programme are carried out, and the good order maintained. In these particulars, the result was especially satisfactory, and great credit therefor is due to Capt. E. T. Hayward, chief marshal, and his efficient aids. With a longer programme than ever before, and the largest crowd ever upon the grounds at one time, every

exercise took place at the hour advertised, and not a single disturbance occurred to interfere with the pleasure of the day.

The thanks of the Society are also due Miss Hattie E. Miles, who, this year as for several years past, has given her services gratuitously in the arrangement and designation of articles in the Hall and in clerical work. To the Secretary especially, her aid and that of her assistants have been invaluable. President Miles has also labored constantly in behalf of the Society, and to much purpose as the result shows. The Society is indebted also to Mr. C. B. Dennis, superintendent of the Hall, Mr. Elliot L. Caldwell, Chief of Police Kimball and the members of the police force, and the Rollstone Base Ball Nine for their efforts to make the exhibition successful.

EDW. B. SAWTELL, *Secretary.*

REPORTS OF COMMITTEES.

THOROUGH-BRED STOCK.

The committee award the following premiums:

AYRSHIRES—HERDS.

E. T. Miles, 1st premium,	$6 00

BULLS, TWO YEARS OLD AND UPWARDS.

E. T. Miles, 1st prem.,	5 00
" 2d prem.,	3 00

CALVES.

E. T. Miles, 1st prem.,	4 00
" 2d prem.,	2 00

COWS, FOUR YEARS OLD AND UPWARDS.

E. T. Miles, 1st prem.,	3 00
" 2d prem.,	2 00

CALVES, UNDER ONE YEAR.

E. T. Miles, 1st premium,	$1 50
" 2d prem.,	1 00

JERSEYS—HERDS.

J. F. Brown, 1st prem.,	6 00

BULLS, TWO YEARS OLD AND UPWARDS.

J. F. Brown, 1st prem.,	5 00

BULLS, ONE YEAR OLD AND UNDER TWO.

J. F. Brown, 1st prem.,	4 00
T. S. Wood, 2d prem.,	2 00

COWS, FOUR YEARS OLD AND UPWARDS.

J. F. Brown, 1st prem.,	3 00
" 2d prem.,	2 00

COWS, THREE YEARS OLD AND UNDER FOUR.

J. F. Brown, 1st prem.,	2 50
" 2d prem.,	2 00

COWS, TWO YEARS OLD AND UNDER THREE.

J. F. Brown, 1st prem.,	2 00
" 2d prem.,	1 50

COWS, ONE YEAR OLD AND UNDER TWO.

J. F. Brown, 1st prem.,	1 50
" 2d prem.,	1 00

CALVES, UNDER ONE YEAR.

J. F. Brown, 1st prem.,	1 50
" 2d prem.,	1 00

DEVONS—BULLS, TWO YEARS OLD AND UPWARDS.

N. B. Reed, 1st prem.,	5 00

CALVES.

N. B. Reed, 1st prem.,	4 00

COWS, FOUR YEARS OLD AND UPWARDS.

N. B. Reed, 1st premium, $3 00

The committee regret that the splendid herd of Messrs. A. & E. Whitman was not entered for premiums. Their Durhams never looked better, and the Messrs. Whitman deserve the thanks of the Society for adding their stock to the exhibition.

The committee found an Ayrshire cow and calf, very fine animals. Not being able to award them premiums as they were not entered in accordance with the rules of the Society, we recommend a gratuity of two dollars each. Also the committee found a Dutch cow, belonging to C. A. Phillips, but in the absence of a pedigree could not award a premium but recommend a gratuity of two dollars.

EDWIN D. WORKS, *Chairman.*

ANIMALS FOR EXHIBITION.

YEARLING HEIFER.

A. P. Goodrich, gratuity, $2 00

E. D. WORKS, *Chairman.*

STOCK NOT THOROUGH BRED—MILCH KINE.

The committee award the following premiums:

BEST HERD—COWS FOR MILK.

Joel Page, 1st premium,	$5 00
Stillman Stone, 2d prem.,	3 50

SINGLE COW FOR BUTTER.

Liberty Wellington, 1st prem.,	2 50
Edwin Richardson, 2d prem.,	2 00

SINGLE COW FOR MILK.

Edwin Richardson, 1st premium,	$2 50
C. A. Phillips, 2d prem.,	2 00

HEIFERS, THREE YEARS OLD FOR BUTTER.

Jacob Haskell, 1st prem.,	2 50

HEIFERS, THREE YEARS OLD FOR MILK.

Stephen Shepley, 1st prem.,	2 50
Edwin Richardson, 2d prem.,	2 00

HERD—FOUR COWS.

Liberty Wellington, gratuity,	3 00

COW FOR MILK.

A. B. Damon, gratuity,	2 00

STILLMAN STONE, *for the Committee.*

Statement of Liberty Wellington of Ashby.

I enter a herd of four cows for milk. No. 1, 10 years old, calved in June, 1875. She gave from June 20th to Sept. 20th, 3439 lbs. of milk, equal to 38½ lbs. per day. No. 2, calved in January, 1875; No. 3 calved in February, 1875; they gave in the month of May, 1956 lbs. of milk, equal to 27⅛ per day. No. 2 is 8 years old. No. 2 gave in one week, commencing July 18, 213 lbs. of milk, equal to 30 3-7 lbs. per day. No. 3 gave in one week commencing July 18, 183 lbs., equal to 26 1-7 lbs. per day. No. 3 is 6 years old. No. 4 is 3 years old, and calved in June 1875. She gave from June 27th to Sept. 20th, 2280 lbs. of milk, equal to 26 7-10 per day. I also enter No. 1 and 4 for butter. No. 1 made 12¼ lbs. of butter in one week, commencing June 20th, and 9¼ lbs. in one week, commencing Sept. 5th. No. 4 heifer made 9 lbs. in one week, commencing June 27th, and 7¼ lbs. in one week, commencing Sept. 12th. Feed, pasturing with three pints of Indian meal and three quarts shorts daily. I enter No. 1 as single cow for milk. I enter No. 4 as heifer for milk.

HEIFERS AND HEIFER CALVES.

HEIFERS, TWO YEARS OLD.

N. B. Reed, 1st premium,	$2 00
" 2d prem.,	1 50

YEARLINGS.

Stillman Stone, 1st prem.,	1 50
N. B. Reed, 2d prem.,	1 00

CALVES.

A. S. Jefts, 1st prem.,	2 00
T. S. Wood, 2d prem.,	1 50

THEODORE WOOD, *for the Committee.*

YEARLING STEERS, STEER CALVES AND PENS OF CALVES.

STEER CALVES.

A. Russell, 1st premium,	$3 00

PENS OF CALVES.

T. D. Wood, 1st prem.,	5 00

ABEL MARSHALL, *Chairman.*

Statement of T. Dwight Wood.

These seven calves of Jersey and Native breeds were allowed to suck from two to five days, then fed with new milk about the same time, then gradually put to skimmed milk and wheat meal gruel, using a small quantity of meal at first, increasing to one quart each per day, and substituting hay-tea for milk, weaning at from three to five months old, according to the time in the season.

WORKING OXEN AND STEERS.

WORKING OXEN.

N. B. Reed, 1st premium,	$5 00
Joseph Cushing, 2d prem.,	3 00

STEERS, THREE YEARS OLD.

N. B. Reed, 1st prem.,	2 50

BEST MINOR TEAMSTER.

R. W. Robinson, 1st prem.,	2 00

There were eight pairs of working oxen that were entered and competed for the premiums; there was but one pair of working steers, and but one minor ox teamster. We would say that the oxen all did their work well and were a credit to the owners, and we were highly gratified to see that the use of the goad and whip was in a measure abandoned, the practice of beating and pounding oxen to make them draw or back cannot be too highly censured. The one pair of working steers which were presented did credit to the owner as a good trainer, a good feeder, and a man who knows what a good fashioned steer is, and we were unanimous that they were hard to beat and deserving the premiums we gave them. The minor ox teamster did his work well and your committee were glad to see one young man who was willing to come forward and try, and have it said that he was the best ox driver; we hope that at our next annual Show, every pair of working oxen and steers will have a minor teamster, for we consider it a more honorable occupation for a stalwart young man than measuring off quality and tape to the ladies, or weighing sugar and codfish in a grocery.

WILLIAM WOODBURY, *for the Committee.*

FAT CATTLE.

The committee report:

OXEN.

E. T. Miles, 1st premium,	$4 00
Joseph Cushing, 2d prem.,	2 50

COWS.

John Lowe, 1st premium, $3 00

HEIFER.

N. B. Reed, 1st prem., 3 00

STEERS.

N. B. Reed, 1st prem., 3 00

JOHN LOWE, *for the Committee.*

SWINE.

BOARS, MORE THAN ONE YEAR OLD.

Joseph Cushing, 1st premium, $2 00

BOARS, LESS THAN ONE YEAR OLD.

Lyman Nichols, 1st prem., 1 50

BEST FAT HOG.

E. T. Miles, 1st prem., 4 00
A. S. Jefts, 2d prem., 2 00

PIGS.

Lyman Nichols, 1st prem., 2 00

BREEDING SOWS.

Lyman Nichols, 1st prem., 4 00

WEANED PIGS.

Lyman Nichols, 1st prem., 2 00

JOSEPH CUSHING, *for the Committee.*

POULTRY.

BRAHMAS.

J. A. Marshall, 1st premium, $1 00
E. T. Miles, 2d prem., 50

AGRICULTURAL COLLEGE

WHITE LEGHORNS.

Lyman Nichols, 1st premium,	$1 00
J. Edward Putnam, 2d prem.,	50

S. S. HAMBURGS.

S. Bascomb, 1st prem.,	1 00

BOLTON GREYS.

John F. Brown, 2d prem.,	50

TURKEYS.

Lyman Nichols, 1st prem.,	1 50
A. S. Jefts, 2d prem.,	1 00

DUCKS.

Lyman Nichols, 1st prem.,	1 50

J. H. FARNUM, *for the Committee.*

TOWN TEAMS.

The only entry was that of three yokes of oxen by Joseph Cushing, in behalf of Fitchburg, and the committee recommend a gratuity of ten dollars.

ABEL MARSHALL, *for the Committee.*

HORSES.

GENTLEMEN'S DRIVING HORSES—SINGLE.

The promptness with which the Committee on horses in this class responded to the programme, and the equal punctuality with which the owners with their horses appeared upon the track, at the call of the marshal in charge, Mr. F. W. Wright, was commendable, and doubtless fully appreciated by the marshal.

There were seven horses entered in this class by the owners, viz: H. G. Morse, Rodney Wallace, A. O. Hitchcock, Geo.

E. Goodrich and Geo. Jewett of Fitchburg, G. P. Hawkins and M. S. Heath of Lunenburg; all of which appeared at the Judge's stand on the track, at the call of the bell, except A. O. Hitchcock's.

While your committee do not wish to be understood that they considered these six horses, as gentlemen's driving horses, superior to scores of others within the limits of this society, still they believe that they are legitimately and properly entered in the class of gentlemen's driving horses.

There is a distinction to be made, (in the minds of your committee, at least,) between a gentleman's and a family driving horses.

This distinction is made in the offer for premiums by the society, in as much as speed is to be considered in the one case, while it is not mentioned in the other, and is patent to all horsemen of much experience.

The horses were started from the Judge's stand, and each made his mile by going twice around the track, all showing fair speed, and for the most part adhering to a steady gait and trot.

No *time* was taken, hence none can be reported.

After examination and comparison of notes, the committee unanimously award the premiums as follows:

Rodney Wallace, 1st premium,	$6 00
Geo. E. Goodrich, 2d prem.,	4 00
H. G. Morse, 3d prem.,	3 00
G. P. Hawkins, 4th prem.,	2 00

All of which is respectfully submitted by the Committee.

EUGENE T. MILES, *Chairman.*

MATCHED DRIVING AND FAMILY HORSES—SINGLE.

When the call was made for horses in these two classes, none of the committee originally appointed by the trustees were upon the grounds (one of the number, Mr. L. N. Smith of Baldwinville, having deceased since his appointment), and the Marshal in charge selected the following named gentlemen to act as committee, viz: Eugene T. Miles, Rodney Wallace and J. H. Lockey, and they beg leave to report:

There were four entries in the class of matched driving horses, made by the following named gentlemen, viz: H. G. Morse, George H. Manchester, Jos. W. Palmer of Fitchburg, and J. F. Brown of Lunenburg.

All appeared promptly at the call, except Mr. Brown, who having exhibited in the immediately preceding class, necessarily required some little time to arrange his double team.

The horses were shown upon the track, making from one-half to a full mile. By a rule of the Society, the committees are not bound to award a premium for anything which they shall deem inferior.

Had your committee adhered to this rule, their judgment would have been to award only the third and fourth premiums, and one pair would not have been considered in any sense as Matched Driving Horses—owing to their weight, movement and action, but as unusual exertions were made to induce our people to exhibit this year, in the hope of instilling new life and interest in the society and its exhibitions, and as the total amount of the four premiums is only fifteen ($15) dollars, your committee feel that the non-observance of this rule will not be detrimental to the interests of the society, they therefore make the following awards:

J. F. Brown, Lunenburg, 1st premium,	$6 00
H. G. Morse, Fitchburg, 2d prem.,	4 00
Geo. H. Manchester, Fitchburg, 3d prem.,	3 00
Jos. W. Palmer, Fitchburg, 4th prem.,	2 00

FAMILY HORSES.

It is to be regretted that out of the large number of horses owned within the limits of this society, properly eligible in this class, the large number of visitors to this exhibition should be treated to so poor a show as to numbers as was the case here.

Only four entries were found upon the books, and they were responded to promptly at the call.

These entries were made by the following named gentlemen: Geo. E. Goodrich, Geo. R. Wallace, and H. F. Coggshall of Fitchburg, and J. F. Brown of Lunenburg.

After reasonable exercise on the track the awards were made as follows :

Geo. E. Goodrich, Fitchburg, 1st premium,	$6 00
Geo. R. Wallace, Fitchburg, 2d prem.,	4 00
J. F. Brown, Lunenburg, 3d prem.,	3 00
H. F. Coggshall, Fitchburg, 4th prem.,	2 00

In this case the committee ignored the rule referred to in the report on Matched Driving Horses.

It is hoped that at the next exhibition of this society, the committee, whoever they may be, may have the opportunity and pleasure to exercise their judgment upon a much larger number of family horses, than has fallen to the lot of the present committee.

It is hardly necessary to add that entire unanimity prevailed with the committee in making these awards.

Respectfully submitted in behalf of the committee.

EUGENE T. MILES, *Chairman.*

COLTS.

STALLIONS, THREE YEARS OLD.

Joseph Marshall, 1st premium,	$5 00

GELDINGS, THREE YEARS OLD.

Abel S. Farwell, 1st prem.,	5 00

FILLIES, THREE YEARS OLD.

F. L. Boutelle, 1st prem.,	5 00

GELDINGS, TWO YEARS OLD.

Joseph Marshall, 2d prem.,	1 50

FILLIES, TWO YEARS OLD.

Joseph Marshall, 1st prem.,	3 00

YEARLINGS.

H. B. Fuller, 1st premium, $2 50

C. H. Brown, *for the Committee.*

STALLIONS, MARES AND SUCKING COLTS.

STALLIONS.

Joseph Marshall, 2d premium, $5 00

BREEDING MARES.

Edwin Richardson, 1st prem., 4 00
D. W. Pratt, 2d prem., 2 50

COLTS, LESS THAN ONE YEAR OLD.

Edwin Richardson, 1st prem., 2 00
D. W. Pratt, 2d prem., 1 50

Ohio Whitney, *for the Committee.*

PLOUGHING MATCHES.

HORSE TEAMS.

Joel Page, 1st premium, $5 00

But one team was entered, that of Joel Page of Fitchburg, with No. 24 Hakes Plough, and the Committee are unanimous in the opinion that he deserves the first premium.

Stephen Shepley, *for the Committee.*

OX TEAMS.

The committee award :

Joseph Cushing, 1st prem., 5 00
W. H. Fuller, 2d prem., 3 00
N. B. Reed, gratuity, (recommended) 3 00

W. B. Hosmer, *for the Committee.*

HORSE TROT.

Open to horses owned by members of the Society and that have never trotted for a purse:

H. G. Morse, 1st premium,	$25 00
M. S. Heath, 2d prem.,	15 00
G. P. Hawkins, 3d prem.,	10 00

Best time, 3:12.

EDW. B. SAWTELL, *for the Committee.*

SLOW TROTTING HORSES.

Thomas Upton, 1st premium,	$15 00
H. F. Coggshall, F. C. Currier, } 2d prem., (divided)	10 00

Worst time, one-half mile, 11 min. 39 sec.

LADIES' DRIVING HORSES.

Mrs. Geo. E. Goodrich, 1st premium,	$8 00
Mrs. Wm. Tamplin, 2d prem.,	5 00

A. L. BURDITT, *for the Committee.*

LADIES' SADDLE HORSES.

Miss Annie Miles, 1st premium,	$8 00
Miss F. E. Kimball, 2d prem.,	5 00

A. L. BURDITT, *for the Committee.*

FOOT RACE—HALF MILE.

P. J. Sullivan, 1st premium,	$6 00

Time, 2 min. 15 sec.

SACK RACE.

Thomas McCoy, 1st premium, $6 00

S. J. M. WESTON, *for the Committee.*

CROPS.

GRAIN.

The Committee of the Worcester North Agricultural Society, appointed to award premiums on grain, make the following report:

That no field crops were entered for premiums. Whether the financial condition of the Society was the cause of this neglect, your committee have not been able to report; but would here observe, that the grain crop sounds the key-note to our prosperity, *that* and the grass crop furnish us with the Staff of Life, and ought not to be ignored at our fairs.

This neglect was partly atoned for in the grand display of specimens of grain exhibited in the Hall, as follows:

Two traces of the celebrated Carter corn by Chas. C. Boyden of Leominster, were on exhibition; this prolific variety has heretofore received a premium for more than one hundred bushels of dry shelled corn to the acre.

Another trace of beautiful seed corn was exhibited by Stillman Stone of Lunenburg; the ears were large and long, and said to be early; two strings and a cluster of corn by Andrew Russell of Fitchburg; one trace of mixed corn by Thomas Oakman of Fitchburg; one handsome trace of Brown or King Phillip corn by Franklin Nourse of Sterling; one trace of white sweet corn by E. T. Miles; one trace of field corn by D. S. Eaton; one trace of field corn by A. W. Damon, and one trace of field corn by A. S. Jeffts.

Your reporter exhibited half a bushel of Tappahannock winter wheat, said to ripen a week or ten days earlier than any other variety in the United States. Also half a bushel of white Schooner oats, weighing 44 lbs. to the bushel. Also half a bush-

el of improved rye, nice for seed. Several other specimens were exhibited of less note, still, aiding to complete the show.

Your committee would close by recommending more attention to the growing of Indian corn, which is a native of this country and well adapted to develope both brain and muscle, as well as furnishing forage for cattle, when it is properly cured. Also the culture of rye, which coalesces so well and improves the Brown Loaf, and the straw is worth as much as the grain, which makes it a valuable crop.

Respectfully submitted.

CYRUS KILBURN, *for the Committee.*

APPLES, PEACHES, PLUMS AND QUINCES.

The committee make the following award:

APPLES.

TWELVE VARIETIES.

C. C. Boyden, 1st premium,	$3 00
S. N. Bascom, 2d prem.,	2 00

SIX VARIETIES.

D. S. Eaton, 1st prem.,	2 00
E. H. Choate, 2d prem.,	1 50

THREE VARIETIES.

Jabez Fisher, 1st prem.,	1 50
D. Pratt, 2d prem.,	1 00

BALDWINS.

W. B. Hosmer, 1st prem.,	1 00
C. C. Boyden, 2d prem.,	50

HUBBARDSTON NONESUCH.

C. C. Boyden, 1st prem.,	1 00
D. S. Eaton, 2d prem.,	50

RHODE ISLAND GREENINGS.

C. C. Boyden, 1st premium,	$1 00
W. B. Hosmer, 2d prem.,	50

ROXBURY RUSSETTS.

C. C. Boyden, 1st prem.,	1 00
W. B. Hosmer, 2d prem.,	50

PALMER GREENINGS.

C. C. Boyden, 1st prem.,	1 00
M. S. Heath, 2d prem.,	50

GRAVENSTEIN.

C. H. Colburn, 1st prem.,	1 00
A. S. Jeffts, 2d prem.,	50
H. H. Brigham, gratuity,	50
Thomas Upton, gratuity,	50
S. Shepley, gratuity,	50
Thomas Palmer, gratuity,	50

PEACHES.

BEST COLLECTION.

M. S. Heath, 1st premium,	$3 00

BEST DISH.

W. Wyman, 1st prem.,	2 00
J. M. Twichell, 2d prem.,	1 00
Walter Heywood, gratuity,	1 00
S. H. Bascom, gratuity,	1 00
S. Stone, gratuity,	1 00
F. C. Currier, gratuity,	50
J. A. Marshall, gratuity,	50

PLUMS.

J. Haskell, 1st premium,	$1 00

JABEZ FISHER, *for the Committee.*

PEARS AND GRAPES.

The committee award as follows:

PEARS.

TWELVE VARIETIES—5 EACH.

Geo. Jewett, 1st premium,	$3 00
J. M. Twichell, 2d prem.,	2 00

SIX VARIETIES—5 EACH.

J. Fisher, 1st prem.,	2 00
Estate of A. Crocker, 2d prem.,	1 50

THREE VARIETIES—5 EACH.

D. Pratt, 1st prem.,	1 50
James Kane, 2d prem.,	1 00

BARTLETTS—12 SPECIMENS.

E. T. Miles, 1st prem.,	1 00
C. H. Colburn, 2d prem.,	50

SECKELS.

C. H. Colburn, 1st prem.,	1 00
Jabez Fisher, 2d prem.,	50

DUCHESS.

H. H. Brigham, 1st prem.,	1 00

LOUISE BONNE DE JERSEYS.

S. Sawyer, 1st prem.,	1 00
A. B. Holden, 2d prem.,	50

LAWRENCE.

Jabez Fisher, 1st prem.,	1 00
Estate of A. Crocker, 2d prem.,	50

BEURRE D'ANJOU.

G. B. Knowlton, 1st prem.,	1 00
Estate of A. Crocker, 2d prem.,	50

SHELDON.

Geo. Jewett, 1st premium,	$1 00
J. M. Twichell, 2d prem.,	50

FLEMISH BEAUTIES.

H. W. Nutting, 1st prem.,	1 00
Estate of A. Crocker, 2d prem.,	50

GRAPES.

BEST DISPLAY OF NATIVES.

Jabez Fisher, 1st premium,	$5 00
E. T. Miles, 2d prem.,	3 00

CONCORD—SIX CLUSTERS.

Jabez Fisher, 1st prem.,	1 00
E. T. Miles, 2d prem.,	50

DELAWARE—SIX CLUSTERS.

Jabez Fisher, 1st prem.,	1 00
E. T. Miles, 2d prem.,	50

FOREIGN GRAPES.

E. T. Miles, gratuity,	5 00

ESTABROOK MOORE, *for the Committee.*

ASSORTED FRUITS AND FLOWERS.

The committee report as follows :

J. M. Sawtell, 1st premium,	$2 00
J. M. Sawtell, 2d prem., best 3 plants in pots,	2 00

CUT FLOWERS.

M. E. Fiske, 1st prem.,	2 00
J. M. Sawtell, 2d prem., best 5 named asters,	1 00
J. M. Sawtell, 1st prem., best 5 named dahlias,	2 00
J. M. Sawtell, 1st prem., best 5 named verbenas,	2 00

CUT FLOWERS—CONTINUED.

J. M. Sawtell, 1st premium, best pair parlor bouquets,	$2 00
M. E. Fiske, 2d prem., " " "	1 00
Ernest Brown, boxcomb plants, gratuity,	25
Mrs. E. P. Withington, cotton plant, gratuity,	75
Benj. Safford, wild flowers,	50
W. J. Clifford, bouquet,	50
Mrs. N. H. Damon, bouquet,	25
Mrs. J. A. Battles, dried flowers,	25
Mrs. Nancy Snow, 3 bouquets,	25
M. E. Fiske, variety of pansies,	50
M. E. Fiske, variety of Petunias,	25
J. M. Sawtell, variety of fuschias,	25

ALICE SHEPLEY, *for the Committee.*

VEGETABLES.

BEST COLLECTION KITCHEN VEGETABLES.

E. T. Miles, 1st premium,	$4 00

MARROW SQUASHES.

Stillman Stone, 1st prem.,	1 00
A. P. Goodridge, 2d prem.,	50

HUBBARD SQUASHES.

E. T. Miles, 1st prem.,	1 00
Thomas Oakman, 2d prem.,	50

PUMPKINS.

J. A. Marshall, 1st prem.	75
C. H. Stockwell, 2d prem.,	50

ONIONS.

C. C. Boyden, 1st prem.,	75

TURNIP BEETS.

E. T. Miles, 1st prem.	75

TOMATOES.

Sylvanus Sawyer, 1st prem.,	50

FIELD BEANS.

S. M. Bascom, 1st premium,	50

SEED CORN.

C. C. Boyden, 1st prem.,	$1 00
Stillman Stone, 2d prem.,	75

GRATUITIES.

E. H. Choate, kitchen vegetables,	1 00
Sylvanus Sawyer, " "	1 00
Abel Marshall, " "	50
E. H. Choate, pumpkin,	25
S. M. Dole, Hubbard squashes,	50
S. Fergerson, " "	25
Abel Marshall, " "	25
Sylvanus Sawyer, " "	50
E. T. Miles, " " weight 152½ lbs.,	50
M. Pond, " "	50
E. T. Burnap, potatoes,	75
F. Nourse, seed corn,	50
A. S. Jeffts, " "	50

THOMAS UPTON, *for the Committee.*

BREAD, BUTTER, CHEESE, PICKLES, &C.

The committee award as follows:

WHITE BREAD.

Miss Mary Sullivan, 1st premium,	$2 00
Mrs. S. M. Pierce, 2d prem.,	1 00
Miss Mary A. Skeehan, 3d prem.,	50

UNBOLTED WHEAT BREAD.

Miss Mary A. Skeehan, gratuity,	75
Mrs. Josiah Stratton, gratuity,	25

RYE AND INDIAN BREAD.

Miss Mary Atherton, 1st prem.,	2 00
Willie S. Marshall, (age 11 years,) 2d prem.,	1 00
Mrs. S. M. Pierce, 3d prem.,	50

LUMP BUTTER.

S. S. Wood, 1st premium,	$4 00
Franklin Nourse, 2d prem.,	3 00
Mrs. T. D. Wood, gratuity,	1 50
Thomas Oakman, gratuity,	1 00

JUNE TUB BUTTER.

T. S. Wood, 1st prem.,	3 00

CHEESE.

Mrs. T. D. Wood, 1st prem.,	2 00

CANNED FRUITS.

Miss Clara Marshall, gratuity,	1 00
C. W. Babbitt, gratuity,	1 00

HONEY.

S. E. Brigham, 1st prem.,	2 00
A. S. Jeffts, 2d prem.,	1 00

PICKLES.

Mrs. Nancy Snow, 1st prem.,	1 00

JELLIES.

Mrs. Nancy Snow, gratuity,	1 00
Mrs. Daniel Pratt, gratuity,	25

MRS. E. T. MILES, *for the Committee.*

Statement of T. S. Wood.

The butter I exhibit was made from a dairy of eleven cows, which made 400 pounds in the month of June besides supplying two large families with milk. Set milk in shallow pans, about thirty-six hours ; cream churned at a temperature from 54 to 56 degrees in hot weather, and from 60 to 62 degrees in cool weather.

Statement of Franklin Nourse.

This box of butter, I offer for premium, was made from a herd of ten cows, composed of Jerseys, Ayrshires and high grades. The milk while warm from the cows is strained in common tin pans, and set in a cool, well-ventilated milk-room, upon slats instead of board shelves, there remaining from thirty to thirty-six hours according to weather. Then taken off, put into stone jars, stirring each time as new cream is added. Churn twice a week in a rotary churn. After butter has come, it is taken out and partially worked and salted, 1½ ounce to the pound, and after a suitable time it is again thoroughly *worked*, weighed and lumped. I do not believe in adulterating butter with sugar as is the practice of some who make their cows feed in low marsh ground. All that is wanting to ensure good butter is to turn the cows on to a sweet hill pasture where there is plenty of feed.

Statement of T. S. Wood.

The milk stands in tin pans from twenty-four to thirty-six hours in a cool place; churn every four or five days; use salt about one ounce per pound.

Statement of Mrs. T. D. Wood.

The process of making this new milk cheese is as follows: skim the night's milk; warm the milk; then add the cream to the warm milk; when well stirred put the morning's milk to it, using rennet enough to form the curd; drip off the whey, and when sufficiently hard cut the curd fine; salt with the best butter salt, using a dessert spoonful to a pailful of milk. Press from thirty-six to forty-eight hours, turning three or four times while pressing, then remove to a suitable shelf, turned daily, applying butter.

FINE ARTS.

The committee award:

OIL PAINTINGS.

Miss Addie R. Sawyer, 1st premium,	$2 00
Mrs. C. A. Wheeler, 2d prem.,	1 00

CRAYON DRAWINGS.

Miss Addie R. Sawyer, 1st premium,	$1 50
Wm. B. Bennett, 2d prem.,	1 00

PENCIL DRAWINGS.

Mrs. J. A. Battles, 1st prem.,	1 00
Miss Emma Palmer, 2d prem.,	50

PENMANSHIP.

Fred S. Stimpson, 1st prem.,	50

GRATUITIES.

Mrs. Ellen F. Reed, crayon portrait,	75
Mrs. H. P. Tyrrell, "	25
Miss E. May Caldwell, charcoal drawings,	1 50
Miss Addie K. Sawyer,	1 75
Mrs. J. A. Battles,	50
W. B. Bennett,	1 25
Miss Emma F. Kimball,	50
George Wilson, architectural drawings,	75
Mrs. C. A. Wheeler,	50
Mrs. Smith, pressed ferns,	50
Miss Emma Palmer, drawings,	25
C. J. Becker, penmanship,	35

ELLA NORCROSS, *for the Committee.*

MANUFACTURED ARTICLES.

Herbert O. Morse, sewing machine,	$4 00
E. B. Sears, gentlemen's furnishing goods,	5 00
W. A. Dunn, family sewing machine,	2 00
E. P. Kittredge, clothing and custon made shirts,	5 00
Rockwell & Phillips, worsted coatings and suitings,	6 00
Charles Bowker, carpet sweeper,	1 00
H. A. Spooner, street lantern and hitching post,	2 00
Rollstone Machine Works, meat chopper and apple parer,	1 50
Wilbur F. Morse, toy chamber set,	2 50
Stratton Bros. & Hill, chamber sets,	10 00
W. H. Jewett & Co., rosewood piano,	7 00
Chas. Fessenden, four harnesses,	5 00
S. G. Frost, three harnesses,	4 00
Chas. Fessenden, Concord wagon,	3 00

MANUFACTURED ARTICLES—CONTINUED.

S. G. Frost, agent, box wagon,	$4 00
Geo. Robbins & Co., four stoves,	5 00
Geo. B. Knowlton, stoves and pressed tin,	5 00
J. K. P. Wood, parlor furniture,	7 00
Haskins Machine Co., portable steam engine,	5 00
New England Machine Co., plainer chuck,	1 00
M. T. Morse, brackets,	1 50
E. M. Dickinson & Co., shoes,	2 00
B. W. Eddy & Co., pens and stationery,	2 00
C. S. Keith, " "	2 00
J. P. Lockey, ladies' back combs,	3 00
Standard Laundry Machine Co., power washer, No. 1,	5 00
" " " " " " No. 2,	3 00
" " " " " " hand No. 4,	2 00
" " " " " " " No. 5,	1 00
" " " " " wringer No. 4,	2 00
" " " " " " No. 5,	1 00
J. T. Ellsworth, oscillating churn,	3 00
Buckeye Machine Co., New Model Buckeye Mower No. 2,	6 00
" " " " " " " No. 3,	3 00
" " " Hand Mangle,	3 00
" " " Cider and Wine Mill, No. 1,	2 00
" " " " " " No. 2,	1 00
S. R. Nye, horse rake,	3 00
Waymoth & Co., field and parlor croquet set,	1 00
Chas. G. Allen, Yankee Horse Rake,	4 00
Ames Plough Co., lawn mower,	1 00

JOHN Q. WRIGHT, *for the Committee.*

FANCY ARTICLES.

The committee award:

Mrs. Luke Whitney, silk quilt,	$1 50
Annie W. Baxter, " "	1 25
Mrs. H. P. Tyrrell, " "	1 00
Mrs. Eunice P. Withington, cotton quilt,	1 00
Mrs. Anna McIntire, " "	75
Mrs. Mary S. Gates, " "	50
Mrs. F. S. Bascom, " "	25
Mrs. Maxham Baker, worsted quilt,	75
Mrs. Thomas Sheehan, rug,	1 00
Miss E. M. Caswell, rug,	75

FANCY ARTICLES—CONTINUED.

Mrs. Jefferson Kimball, rug,	75
Mrs. Tamor Sheldon, braided mats,	50
Mrs. B. W. West, sofa pillow,	75
Mrs. S. M. Huntley, sofa pillow,	50
Mrs. Edw. B. Sawtell, sofa pillow,	25
Mrs. Lucy Putnam, silk embroidery,	75
Mrs. A. H. Newton, " "	50
Miss Lizzie F. Coggshall, bead work,	75
Miss Lella Goddard, toilet cushion, &c.,	50
Mrs. B. W. West, " " "	25
Mrs. J. A. Battles, wax cross,	1 00
Mrs. A. H. Newton, infant's wardrobe, &c.,	50
Miss Emma Goddard, toilette mats,	50
Miss Hattie E. Miles, toilette sets,	50
Miss Addie E. Stimson, " "	50
Mrs. B. W. West, bureau cover and pillow shams,	50
Miss Myra Goddard, tidy and table cover,	50
Miss Annie R. Miles, motto,	50
Miss Marion Davis, watch case,	25
Mrs. N. S. Stimson, ottoman cover,	25
Mrs. A. H. Newton, toilette set,	25
S. H. Bascom, case of insects,	25
Miss Lella Goddard, toilette cushion,	25
Mrs. J. A. Battles, lamp mat,	25
Miss Mary E. Leonard, towel rack,	25
Miss Della Rice, down basket,	25
Miss Cora A. Emory, rag bag,	25
Mrs. Nancy Snow, cushion,	25
Mrs. Daniel Pratt, tidy,	25
Mrs. Edw. B. Sawtell, tidy,	25
Mrs. A. A. Farnsworth, tidy,	25
Miss Clara E. Marshall, tidy,	25
Mrs. A. E. Bohannon, tidy,	25
Miss Addie Wright, tidy,	25
Miss Emma F. Kimball, tidy,	25
Miss Flora E. Rice, tidy,	25
Miss Mabel A. Miles, motto,	25
Miss Florence Fitts, motto,	25
Miss Hattie E. Miles, motto,	25
Miss Mary E. Leonard, motto,	25
Miss Myra Goodrich, motto,	25

MRS. L. H. BRADFORD, *for the Committee.*

ANALYSIS OF PREMIUMS AND GRATUITIES AWARDED.

Amount awarded for:

Horses,	$183 50
Neat Stock,	144 00
Swine,	17 50
Poultry,	8 50
Ploughing,	16 00
Town Teams,	10 00
Fruits,	71 50
Flowers,	17 75
Vegetables,	20 00
Bread,	8 00
Butter,	12 50
Cheese,	2 00
Preserves,	7 75
Fine Arts,	16 35
Manufactured Articles,	136 50
Other Objects,	36 50
Total,	$708 35

ANALYSIS OF PREMIUMS.

The premiums and gratuities awarded to one hundred and seventy persons, were distributed as follows:

Fitchburg,	$476 85
Lunenburg,	74 25
Leominster,	73 50
Princeton,	33 00
Westminster,	20 50
Winchendon,	8 00
Barre,	7 00
Ashby,	5 50
Sterling,	3 50
Townsend,	2 75
Gardner,	2 25
New Ipswich, N. H.,	1 25

The premiums and gratuities have been paid.

TREASURER'S REPORT.

Edw. B. Sawtell, Treasurer in account with the Worcester North Agricultural Society:

1874.		*Cr.*
Dec. 9,	By cash paid J. L. Piper, printing,	$8 50
	Postal cards,	40
Dec. 12,	D. C. Miles, cash paid out,	5 00
	Premiums of 1873,	77 25
Dec. 17,	Stamps and envelopes,	1 50
	Clerical services,	3 00
Dec. 25,	Premiums,	145 91
Dec. 29,	Sentinel Printing Co.,	2 50
Dec. 30,	Insurance,	26 00
1875.		
Jan. 1,	Stamps and envelopes,	1 00
Jan. 8,	Express,	15
Jan. 13,	Express,	15
Jan. 20,	Envelopes, wrappers and postage,	12 60
Feb. 20,	Lucius Aldrich bill,	18 21
Mar. 22,	Express on State reports,	60
Mar. 24,	J. L. Piper, paper and printing,	11 00
May 20,	Note of Messrs. Cushing, Miles & Fisher,	7,000 00
	Interest on same,	439 41
June 1,	Secretary and Treasurer's past salary,	75 00
June 24,	W. B. Wallis, printing,	6 50
July 3,	Stratton & Spooner's bill, 1872-3,	280 55
	Note of Messrs. Cushing, Fisher & Miles,	3,000 00
	Interest on same,	152 10
July 7,	L. Sprague & Co.'s bill 1873,	50 00
July 8,	J. M. Peck & Co., use of team,	1 50
July 13,	J. Cushing & Co.'s bill for 1873,	6 38
July 14,	Shepley & Stearns' bill, 1873-4,	17 40
	Henry F. Piper's bill 1874, printing,	197 00
July 19,	" " bill 1875, "	123 00
Aug. 9,	Discharge of mortgage and recording,	3 00

Aug. 16,	By cash paid J. A. Battles' bill, 1872.	$31 50
Aug. 26,	S. S. & G. A. Lawrence's bill, 1873,	43 37
Sept. 1,	Secretary and Treasurer's past salary,	37 50
Sept. 4,	Writing lease,	2 00
Sept. 6,	Envelopes and stamps,	4 15
	Mortgage and recording,	3 00
	Blank books,	60
Sept. 11,	Fare of Secretary to Boston and back,	3 00
Sept. 14,	Premiums, 1874,	35 50
Sept. 15,	Premiums, 1873,	33 00
Sept. 17,	Postage and envelopes,	5 00
	T. C. Upton, expenses at Keene,	2 00
	Premiums, 1874,	6 00
Sept. 27,	Ribbon, stationery, &c.,	4 20
Sept. 29,	D. L. Fuller, dinners,	210 00
	C. B. Dennis, superintendent of hall,	15 00
	J. D. Wyman, labor at grounds,	16 25
	C. O. Gott, " "	7 50
	C. A. White, " "	6 90
	Scy West, posting bills,	35 00
	L. J. Brown, cotton cloth,	5 34
	Prizes, foot race,	11 00
	" sack race,	6 00
	" ½ slow trotting race, F. C. Currier,	5 00
	G. A. Miles, services at grounds,	2 00
	J. P. Cobb, " "	2 00
	J. Kemp, " "	2 00
Sept. 30,	Sentinel Printing Co., advertising,	20 00
	J. M. Peck & Co., carriage hire,	11 00
	J. L. Piper, printing bill,	104 50
	G. M. Sawtell, services at grounds,	3 00
	Globe Advertising Co.,	10 00
	S. M. Lovering, services at grounds,	3 00
	P. C. Rice, selling tickets,	3 00
	Expenses, ball game, 28th,	62 50
	G. Fred P. Day, selling tickets,	3 00
	W. B. Kershaw, labor at grounds,	2 00
Oct. 5,	M. Waite, labor at hall,	90
	Padlock and staple,	80
Oct. 8,	H. B. Wood, services as weigher, Sept. 28th,	2 00
	Wright & Fairbanks, nails, &c.,	2 35
	N. T. Dore, watchmen and board,	11 10
Oct. 11,	E. DeWolf & Co., dinners for Band,	22 00
Oct. 13,	A. P. Goodrich, hay,	14 10
Oct. 19,	H. B. Mill, services at grounds,	2 00
	M. Johnson, premiums, 1873,	5 00
	M. Johnson, " 1874,	7 00
Oct. 20,	C. C. Boyden, " 1874,	8 25

Oct. 22,	By cash paid Piper & Boutelle, advertising,	$11 00
Oct. 23,	J. A. Battles, carriage hire,	11 00
Oct. 28,	T. K. Ware, bill 1872,	5 00
Nov. 3,	Six mos. int. on note of Dr. Fisher and others,	404 53
	Part principal of " " "	400 00
	Deposited in Fitchburg Savings Bank,	400 00
Nov. 5,	Sentinel Printing Co.,	2 00
Nov. 17,	D. C. Miles, money expended,	2 00
Nov. 22,	Postal cards,	8 00
Nov. 23,	J. L. Piper, printing,	2 25
Nov. 27,	Sentinel Printing Co.,	1 50
	L. Sprague & Co.,	41
Nov. 30,	Salary, Secretary and Treasurer,	37 50
	Premiums,	365 75
Dec. 1,	On hand,	203 29
		$14,350 75

1874.		*Dr.*
Dec. 3,	To cash on hand,	$224 25
Dec. 12,	D. C. Miles, gift,	10 00
	S. W. A. Stevens, gift,	5 00
Dec. 31,	Guaranty fund,	130 00
1875.		
Feb. 5,	Edward Foley,	50
May 1,	Guaranty fund,	80 00
May 20,	Fitchburg Savings Bank,	7,500 00
June 5,	Shattuck & Davis,	50 00
June 12,	Old iron sold,	2 00
July 3,	Guaranty fund,	30 00
	Fitchburg Savings Bank,	4,500 00
Sept. 4,	Shattuck & Davis,	75 00
Sept. 10,	S. Shepley, tickets to Fair,	12 50
Sept. 28,	Gate receipts,	839 00
	Dinner tickets sold,	210 00
	Use of grounds,	15 00
	Horse entrance fees,	20 50
Oct. 2,	Use of grounds, Sept. 28,	7 00
Oct. 8,	Of State Treasurer,	600 00
Nov. 30,	Memberships,	40 00
		$14,350 75

PRESIDENTS, ORATORS & SECRETARIES.

PRESIDENTS:

1850–1.—ABEL F. ADAMS, Esq., Fitchburg.
1852–3.—Hon. IVERS PHILLIPS, Fitchburg.
1854–5.—Hon. MOSES WOOD, Fitchburg.
1856–7.—THOMAS R. BOUTELLE, M. D., Fitchburg.
1858–9.—Hon. JABEZ FISHER, Fitchburg.
1860–1.—THOMAS BILLINGS, Esq., Lunenburg.
1862–3.—LEWIS H. BRADFORD, Esq., Fitchburg.
1864–5.—Hon. OHIO WHITNEY, Jr., Ashburnham.
1866. —JOSEPH UPTON, Esq., Fitchburg.
1867. —JOSHUA T. EVERETT, Esq., Princeton.
1868. —EUGENE T. MILES, Esq., Fitchburg.
1869. —SAMUEL OSGOOD, Esq., Sterling.
1870. —WILLIAM WOODBURY, Fitchburg.
1871–2.—Hon. JOHN H. LOCKEY, Leominster.
1873. —STEPHEN SHEPLEY, Fitchburg.
1874–5.—DANIEL C. MILES, Westminster.
1876. —JOHN B. PROCTOR, Fitchburg.

ORATORS:

1850.—Hon. CHARLES HUDSON, Lexington.
1852.—THOMAS E. PAYSON, Esq., Rowley.
1853.—Rev. HORATIO STEBBINS, Fitchburg.
1854.—Gov. EMORY WASHBURN, Worcester.
1855.—Hon. NATHANIEL P. BANKS, Waltham.
1856.—CHARLES L. FLINT, Esq., Boston.
1857.—JUSTUS TOWER, Esq., Lanesborough.
1859.—Hon. GEORGE S. BOUTWELL, Groton.
1860.—Hon. GEORGE B. LORING, Salem.
1861.—Hon. A. H. BULLOCK, Worcester.
1862.—Rev. A. N. ARNOLD, D. D., Westboro.
1863.—LUTHER H. TUCKER, Esq., Albany, N. Y.

1867.—GEORGE E. TOWNE, Esq., Fitchburg.
1868.—Hon. DANIEL NEEDHAM, Groton.
1869.—Hon. WILLIAM SPRAGUE, Providence.
1870.—Hon. ALVAH CROCKER, Fitchburg.
1871.—Dr. JAMES R. NICHOLS, Boston.
1872.—Rev. C. W. EMERSON, Fitchburg.

SECRETARIES:

1850–1.—NATHAN UPHAM, Fitchburg.
1852. —JOSEPH PIERCE, Fitchburg.
1853. —CHARLES W. WILDER, Fitchburg.
1854–5.—THOMAS R. BOUTELLE, Fitchburg.
1856–7.—JABEZ FISHER, Fitchburg.
1858–63.-WILLIAM G. WYMAN, Fitchburg.
1864. —LEWIS H. BRADFORD, Fitchburg.
1865–6.—ALVIN M. SAWYER, Fitchburg.
1867–9.—LEWIS H. BRADFORD, Fitchburg.
1870. —WALTER A. EAMES, Fitchburg.
1871–3.—GEORGE S. HOUGHTON, Fitchburg.
1874. —FRANKLIN G. FESSENDEN, Fitchburg.
1875–6.—EDWARD B. SAWTELL, Fitchburg.

LIFE MEMBERS.

In the following list the Post Office address, when it differs from the residence, is given in *italics* after the name; * indicates that the person has removed, but that the present residence is unknown.

ASHBY.

Brown, C. H.
Burr, John
Damon, Samuel R., *Lancaster*
Damon, Ebenezer
Davis, John
Fay, Dennis, *Fitchburg*
Foster, Jesse
Foster, Joseph
Foster, Joel
Gates, Howard
Gates, Paul
Hapgood, Wm. G.
Hayward, Homer J.

Hayward, Joel
Hayward, Paul
Hayward, Samuel
Hayward, John
Hodgman, Luther
Hubbard, Augustus
Hubbard, George B.
Johnson, William
Kendall, George
Smith, Levi
Spencer, Hobart
Wallis, Benjamin
Wallis, B. Frank, *Fitchburg*
Wellington, Liberty
Wright, Charles H.
Wright, Francis W.
Wilder, E. F.
Willard, L. B.

ASHBURNHAM.

Adams, Ivers
Barrell, Nahum
Cummings, John L.
Davis, John C.
Eaton, N. L.
Ellis, Jr., Daniels
Green, Hosea
Harris, Humphrey, *Burrageville*
Houston, Horace W.
Howard, George
Howe, Addison
Howe, Perley
Marble, Warren
Maynard, Antipas
Merritt, Simeon
Russell, Ward
Russell, Franklin
Sampson, George G.
Wallace, Merrick
Wallace, F. W.
Ward, Isaac D.
Ward, Stephen
Whitney, Merrick
Whitney, Ohio
Wilker, John
Wilker, Joseph W.
Willard, Merrick
Winchester, Charles
Winchester, George C.
Woodward, John G.
Whitney, F. A.

BOSTON.

Beal, F. E. L.
Boothby, S. A.
Breck Joseph & Sons,
Comee, William W.
Farwell, Lyman
Haskins, F. W.
Lucas, Edmund G.
Proctor, D. A.
Simonds, Alvan
Tilden, Wm. P.
Whitney, Waldo F.
Whittemore, Belcher & Co.

FITCHBURG.

Aldrich, Lucius
Aldrich, Miss Mary M.
American Rattan Company,
Adams, Erastus *
Applin, Mrs. Sophia S.
Bailey, E. Foster
Baldwin, Joseph
Ball, William *
Ball, S. B.*
Barker, Lorenzo
Barker, Mrs. Lorenzo
Bascom, Silas
Battles, Oscar A.
Battles, George T.
Battles, J. Augustus
Billings, Charles J.
Billings, Mrs. Charles J.
Blood, H. A.
Boutelle, David
Boutelle, Frank L.
Boutelle, Mrs. T. R.
Bradford, Lewis H.
Bradford, Mrs. L. H.
Bradford, Miss Anna T.
Brigham, Charles
Brigham, Seth E.

Brown, E. A.
Brown, Mrs. Bessie M.
Brown, Charles H.
Brown, James D.*
Brown, Horace H.
Brown, L. J.
Brown, James W., *Fitchburg*
Brown, 2d, John F.
Bullock, Laban *
Burnap, Edwin S.
Burnap, Samuel
Buttrick, Francis
Burleigh, Charles
Burney, John
Caldwell, Thomas C.
Carleton, Wm. A.
Caswell, Nathan
Caswell, S. Melville
Childs, S. Austin
Choate, John
Clark, R. B.
Coggshall, Henry F.
Comee, Leander P.
Comee, Charles H.
Conn, John A.
Conn, Reuben R.
Colony, George D.
Corey, David A.
Corey, Jonas
Cotting, William W.
Cowdin, Natt
Crehore, Warren A.
Crocker, Daniel P.
Crocker, Charles T.
Cross, Daniel
Currier, F. C.
Cushing, Charles G.
Cushing, Ellen M.
Cushing, Joseph
Cushing, Joseph W.
Cushing, Milton L.
Cushing, Milton M.
Cushing, Susan E.
Damon, Albert
Damon, George
Daniels, Thomas E.
Dadmun, Charles E.
Davis, Alonzo
Davis, Jonathan P.
Davis, Charles
Davis, Elnathan, *Auburn*
Davis, Joel
Day, William F.
Delahanty, Charles J.
Derby, Gilbert H.
Dickinson, Elijah M.
Dickinson, Charles P.
Dole, A. S.
Dole, S. M.
Downe, Mrs. Leonard
Downe, Edward P.
Downe, Mrs. Edward P.
Drew, Wm. B. S., *West F.*
Dyer, Henry B.
Eames, Walter A.
Eaton, Daniel S.
Eaton, Thomas S.
Eddy, B. Webster
Emerson, Alfred, *Lancaster*
Emory, Charles A.
Emory, William C.
Emory, Edward F.
Emory, Sidney P.
Fairbanks, Charles L.
Fairbanks, Lyman N.
Fairbanks, J. H.
Farrar, Gardner
Farwell, Abel S.
Farwell, Elijah C.
Farwell, Samuel *
Farnsworth, Thomas
Fay, George F.
Fessenden, Charles
Fessenden, Fr. G., *Greenfield*
Fisher, Jabez
Fisher, Mrs. Jabez
Fisher, J. Frank
Fitchburg, City of
Foley, Edward
Frost, S. Gilman
Frye, George A.
Fuller, Hubbard B.
Fitchburg Novelty Works,
Garfield, J. F. D.
Garfield, John
Gerry, E. J.*

Gill, Thomas H.*
Gilbert, Ivar R.
Goodrich, Edwin A.
Goodrich, Emma L.
Goodrich, George E.
Goodrich, Henry A.
Goodrich, Wm. H.
Goodridge, Alonzo P.
Goodridge, Herbert D.
Goddard, R. L., *Palmer*
Goodwin, William H., *West F.*
Gould, William
Gott, Calvin O.
Graves, Howard M.*
Greene, Henry G.
Hadley, Nathan B.
Hale, Samuel
Hannegan, James
Hardy, Wm. A.
Hardon, J. J.
Harris, Gordis D.*
Harris, John M.
Hartwell, Isaac
Haskell, Jacob
Haskell, Miss Lizzie H.
Haskins Machine Co.
Haskins, John F.
Haynes, Stillman
Hayward, E. T.
Hawkins, Gardner P.
Henry, Wm. E. & Co.
Heywood, Walter
Heywood, Mrs. Walter
Hitchcock, Hiland C.
Hogan, Walter W.
Hodges, George L.*
Holmes, Elias
Holman, Silas
Holden, Marquis L.
Hollis, John W.*
Holton, S. S.
Hosmer, Silas
Hosmer, Mrs. Silas
Hosmer, Miss Clara D.
Houghton, Josiah S.
Houghton, Edward L.
Houghton, George S.
Houghton, Mrs. George S.
Jackson, Henry
Jaquith, Caleb W.
Jewett, George
Jewett, Mrs. George
Jewett, Thomas
Jefts, Asia S.
Joel, Reuben
Kenney, William F.*
Kendall, Levi
Kimball, John W.
Kimball, A. P.
Kimball, Herbert W.*
Kimball, H. J.
Kilgore, John C.
Kittredge, Emerson P.
Lawrence, Abram G.
Lawrence, George L.
Lane, Mrs. J. B.
Lewis, Mrs. B. F.
Leathe, Wm. M.
Leonard, R. A.
Leverett, James W.*
Litch, Aaron K.
Litchfield, James D.
Livermore, Charles *
Lowe, Henry J.
Lowe, John
Lowe, Willard H.
Lyon, Moses G.
Macy, E. B.
Manning, Elson W.
Manning, Joseph E.
Macurda, W. A. & Co.
Marshall, Alfred A.
Marshall, Abel
Marshall, Jonas A.
Marshall, Joseph A.*
Mason, Charles
Mason, Caroline
McIntire, David
McIntire, Farrington
McIntire, James
Merriam, David H.
Messenger, Daniel
Miller, Alfred
Miles, Eugene T.
Miles, Mrs. E. T.
Miles, Miss Hattie E.

Miles, Miss Anstis R.
Miles, Miss Mabel A.
Monroe, Edwin P.
Monroe, Mrs. E. P.
Monroe, James F.
Montjoy, George W.
Moulton, J. C.
Murnane, William
Morse, H. G.
Morse, M. J.
Morse, Herbert O.
Nichols, Lyman
Norcross, Amasa
Nutting, George F.
Page, Hale W., *Kalamazoo, Mich.*
Page, Joel
Page, Mrs. Joel
Page, Herbert E.
Page, Walter F.*
Page, Warren B.*
Palmer, Thomas
Palmer, Mrs. Thomas
Palmer, Miss Mary
Palmer, Joseph W.
Partridge, Asa
Patch, Lyman
Patch, Mrs. Lyman
Patch, Lyman B.
Patch, Arthur
Patch, Walter
Pierce, James
Pierce, Joseph
Pierce, 2d, Joseph
Piper, Joseph L.
Piper, Henry F.
Place, J. D.
Pratt, Lawrin
Pratt, Silas
Pratt, Willie F. C.
Prichard, John
Pride, William M.
Proctor, George B.
Proctor, George N.
Proctor, Sullivan G.
Proctor, Benjamin F.
Proctor, John B.
Proctor, Mrs. J. B.
Putnam, James P.
Putnam, Frank P.
Rice, Oran S.
Richardson, Edwin
Richardson, J. B.*
Ripley, Flora B.
Robbins, George
Ruggles, Otis T.
Ruggles, Mrs. Otis T.
Ruggles, Miss Abbie J.
Ruggles, Walter W.
Sabin, John P.
Safford, Benjamin
Sawtell, Charles
Sawtell, Edward B.
Sawtell, Mrs. Edward B.
Sawtell, George M.
Sawtell, John M.
Sawyer, Addie R.
Sawyer, Sylvanus
Sawyer, Alvin M.
Sawyer, Charles B., *West F.*
Sawyer, Charles K., *West F.*
Saunders, Charles*
Shattuck, Warren W.
Sheldon, Francis
Sheldon, Thomas
Sheldon, Samuel D.
Shepley, Charles H.
Shepley, Stephen
Shepley, Mrs. Stephen
Shepley, Francis B.
Sherman, Andrew B.
Simonds, George F.
Simonds, Joseph F.
Smith, Edward
Smith, John
Smith, Joseph
Smith, William P.
Snow, Peter S.
Snow, Benjamin
Snow, Francis H.*
Society, First Universalist
Spaulding, E. G.
Sprague, Leander
Stearns, Varus*
Stebbins, Alice G.
Stickney, George O.
Stiles, James F.

Stiles, Mrs. J. F.
Stoddard, Charles B.
Stone, Norman
Stone, Alanson J., *Lancaster*
Stevens, Levi *
Stratton, Charles C.
Tenney, Jonathan L.
Thurston, Cyrus
Torrey, Ebenezer
Torrey, Mrs. E.
Towne, George E.
Tuttle, Lewis G.
Tuttle, D. Waterman
Twichell, John M.
Twichell, Seth
Upton, Harrison
Upton, John
Upton, Mrs. J.
Upton, Edwin
Upton, Thomas
Upton, Warren C.
Vose, William H.
Wallace, Rodney
Ware, Samuel
Ware, T. K.
Ware, Lewis
Waterhouse, Joseph
Waymoth, A. D.
West, Benjamin W.
West, Clark S.
Weston, S. J. M.
Wheeler, Benjamin
Wheeler, Loring
Wheeler, Lorenzo D.
Wheeler, Samuel A.
Wheelwright, Jr., Geo. W.*
White, W. Fred *
Whitman, Jonathan
Whitman, Augustus, *Leominster*
Whitman, Ephraim
Whitney, Edwin A.
Whitney, Albert E.
Whittemore, Mrs. B. F.*
Willis, Henry A.
Wilkins, Aaron
Wilson, Timothy S.
Wood, Charles H.
Wood, James K. P.
Wood, Mrs. Moses
Wood, Nathaniel
Woodbury, James M.
Woodbury, Miss Maria E.
Woodbury, William
Woodbury, Oscar F.
Works, T. Benton
Works, Edwin D.
Works, George F.*
Wright, J. Q.
Wheeler, John
White, Ivers
Young, Z. F.
Zounglove, T.

GARDNER.

Bancroft, Amasa
Bush, C. W.
Heywood, Levi
Heywood, Seth
Heywood, Charles
Hill, Edwin
Hill, Henry C.
Hill, John W.
Hubbard, George W.*
Parker, David
Sawin, John, *So. Gardner*
Stevens, S. W. A., *So. Gardner*
Taylor, Stephen, *So. Gardner*
Wood, Abel S.
Wood, Asaph, *So. Gardner*

HARVARD.

Bull, Trumbull
Burt, George E.
Farmer, Emroy
Fletcher, Sherman
Hosmer, Samuel
Lane, Edwin
Puffer, Josiah, *Ayer*
Taylor, Zopher
Whitney, Hiram
Whitney, Samuel F.
Willard, Alfred R.

LEOMINSTER.

Allen, Joel C.
Arlington Piano Company,
Boutelle, N. C.
Boyden, Elliott E.
Boyden, Charles C.
Bennett, James
Bird, Ebenezer
Burrage, Emory
Burrage, Leonard, *North Leom.*
Burditt, A. L.
Buss, John L.
Carter, James H.
Carter, Solon
Carter, George R.
Chase, Henry
Cozzens, Joseph
Colburn, Charles H.
Day, N. C.*
Derby, Alden
Derby, Benjamin
Derby, Cephas
Everett, Abram
Field, C. C.
Fuller, William H.
Gates, Augustus
Gates, Edwin
Gates, Whiting
Gates, Jonas W.
Grout, George H.
Harrington, Fred B.
Haskell, Franklin L.
Haws, Manson D.
Hosmer, William B.
Hall, B. F.
Johnson, Ephraim
Johnson, Elbridge
Joslin, Charles L.
Keteridge, Monroe H.
Lincoln, Geo. T.
Lincoln, Timothy
Lockey, John H.
Lockey, John M.
Lyon, A. E.
Marshall, James A.
Marshall, James H.
Marshall, Joseph, *North Leom.*
Merriam, C. H.
Merriam, Gardner
Morse, Augustus *
Moore, Estabrook
Nichols, John F.
Nicholson, Charles R.
Parker, L. W.
Piper, Porter
Pratt, Daniel, *North Leom.*
Putnam & Phelps, *North Leom.*
Rice, George L.
Stratton, Albert
Salisbury, D. W.
Sheldon, G. W.
Snow, Mrs. Nancy, *North L.*
Stratton Bros. & Hill,
Thompson, E. P.
Tilton, Emory
Tisdale, S. A.
Whitney, F. A. Carriage Co.
Williams, A. W.
Woods, George
Woods, Henry A.

LUNENBURG.

Baker, William, *Fitchburg*
Ball, Varnum
Billings, Thomas
Billings, George
Brown, W. L.
Brown, John F.
Brown, Mrs. J. F.
Fairbanks, John
Fiske, Milton E.
Graham, Ephraim, *Boston*
Goodrich, Joseph
Gilchrist, George S.
Heath, Mahon S.
Houghton, Edmund
Johnson, Martin
Kilburn, Cyrus
Kilburn, Mrs. Cyrus
Page, Luther
Pitts, Lemuel *
Putnam, James
Putnam, Daniel
Stone, Eliphalet

Stone, Mrs. J. E.
Stone, Stillman
Whitney, Aaron P.
White, Levi

PRINCETON.

Benson, W. W.
Beaman, Winslow E., *East P.*
Brooks, John
Brown, W. H., *East P.*
Danforth, Nathan *
Everett, J. T., *East P.*
Gill, Emery W.
Gregory, George M.
Hastings, Solon S.
Houghton, George W.
Merriam, J. Edwin
Mirick, Sewall G.
Mirick, Moses H., *East P.*
Mirick, Paul M., *East P.*
Reed, Nathan B.
Richardson, Sewell
Roper, John
Roper, Wilkes
Skinner, George O.
Skinner, Harlow
Thompson, A. G.
Temple, Jonas H., *East P.*
Whitcomb, Joseph, *East P.*
Wilder, Mark, *East P.*

ROYALSTON.

Bemis, Otis, *South R.*
Clark, Edson
Clark, Timothy
Farrar, S. S., *South R.*
Hale, John W., *South R.*
Hale, Silas, *South R.*
Jones, Aaron, *South R.*
Jones, Silas, *South R.*
Perkins, Joseph L.
Raymond, Joseph
Safford, Roby R., *South R.*
Stockwell, Anan, *South R.*
Turner, Ephraim, *South R.*

SHIRLEY.

Davis, George
Edgarton, Charles A., *S. Vill.*
Gardner, Jerome B., *S. Vill.*
Gardner, M. T., *S. Vill.*
Hartwell, Nathaniel
Hazen, Thomas L., *S. Vill.*
Hazen, Jacob P., *S. Vill.*
Munson, Norman C. "
Page, George "
Parker, James O. "
Sanderson, Geo. W. "
Wetherbee, Wm. H. "
Whitney, Thomas E. "

STERLING.

Barron, A. S.
Baldwin, William
Burpee, Edward
Fitch, Charles B.
Flagg, Charles
Hastings, Rufus
Heywood, H. Marcellus
Heywood, Moses B.
Kendall, Ezra
Kendall, George
Loring, Chandler H.
Loring, Maynard
Nourse, Franklin
Osgood, Samuel
Peck, W. D.
Richardson, William B.
Stephenson, John M.
Sawyer, Jonathan M.
Sawyer, Putnam
Sawyer, William H.
Smith, Sidney
Whitney, Joseph

TEMPLETON.

Day, Gilman, *Baldwinville*
Goldsmith, J. G., *Otter River*
Sawyer, Edwin, *Baldwinville*

Sawyer, James, *East Templeton*
Simonds, Warren
Stone, E. W., *Otter River*

WESTMINSTER.

Bacon, Edward
Barnes, Adonijah
Benjamin, A.W., *Wachusett Vill.*
Benson, Bigelow
Brown, Timothy, *Wachusett Vill.*
Carter, Russell O.
Carter, E. R.
Chesmore, Reuben G., *Fitchburg*
Divoll, Luke
Duncan, Geo. N., *Fitchburg*
Ellis, Preston
Flagg, Otis
Forbush, Joseph W.*
Hagar, Isaac *
Holden, Amos B.
Laws, David, *Ashburnham*
Laws, James H.
Leonard, John K.
Merriam, Artemas
Merriam, Caleb S.
Minot, John
Miller, Joseph *
Miles, Daniel C.
Miles, Herbert J.
North, Daniel
Page, Josiah, *Leominster*
Page, Porter F., *West F.*
Puffer, James
Raymond, Asa
Raymond, Eli W.
Sprague, S. H., *Wachusett Vill.*
Towne, George W.*
Waterhouse, Joseph
Whitney, Calvin
White, Marshall
Winship, Handell
Winship, Sylvester
Wood, Timothy D.
Wood, T. S.
Wood, Allen B., *Fitchburg*
Wyman, Benj., *Wachusett Vill.*
Wyman, Franklin
Wyman, David *

WINCHENDON.

Brown, 2d, William,
Cutter, John
Folsom, John G.
Forristal, John M.
Mason, Orlando
Murdock, Jr., Ephraim,
Raymond, Jr., Paul
Whitney, Giles H.
Vose, Jr., Reuben

WORCESTER.

Beaman, G. S.
Bullock, Alexander H.
Boyington, John
Brown, Alzirus
Barnard, A. B.
Chase, Anthony
Davis, Alpheus B.
Howard, Justin
Harris, Gideon
Miles, Charles M.
Phillips, Ivers
Richardson, George W.
Spooner, A. J.
Wellington, Timothy W.
Wheeler, W. A.
Whitcomb, David

MISCELLANEOUS.

Martin Clifford, Amherst; George Chandler, Acton; William S. Merritt, Ashfield; Francis Conant, Boxboro'; J. H. Reed, J. Forbush, Bolton; R. S. Denney, Clappville; William A. Mandell, Cambridge; Washington Nichols, Charlestown; Amory Davidson, Clinton; Rodney Fuller, Dracut; Eli A. Hubbard, Easthampton; Henry G. White, Framingham; Hazen O. Bean, Charles L. Nutting, Groton; Nathaniel Holden, A. L. Lawton, Groton Junction; M. L. May, Hubbardston; Ebenezer Bullard, Hampstead, N. H.; J. A. Harwood, J. H. Whitcomb, Adam Thompson, Littleton; Albert Merriam, Lowell; John W. Piper, Lynn; Samuel Farwell, 2d, Fitchburg; John F. Ware, Milton; A. O. Cummings, Israel Everett, A. C. & J. G. Wood, Millbury; Daniel W. Blood, Pepperell; Edward Powers, Phillipston; John A. Rice, Quincy; Henry B. Jones, Townsend; Asher Green, Mrs. Asher Green, Abram M. White, West Townsend; Stephen Staunton, Wayland; Martin Harris, Warwick; L. H. Rice, West Boylston; E. W. Houghton, Still River; A. H. Brick, Waterbury, Vt.; James O. Kendall, Hartford, Wis.; Luther H. Tucker, Albany, N. Y.; Henry F. Kenney, Philadelphia, Pa.; H. W. Collin, Burlington, Vt.; Joel Foskett, Camden, N. Y.; Horatio Hill, Israel Longley, Chicago, Ill.; Milton Frost, Detroit, Mich.; J. T. Densmore, Charlestown, N. H.; Nathan Whitney, Claremont, N. H.; Hiram W. Albee, Ludlow, Vt.; Artemas F. Andrews, Geo. M. Gage, North Ipswich, N. H.; Solomon P. Burpee, J. M. Stuart, William B. Wood, New York City; Gilman Jones, N. Buffalo, Mich.; Kendall Brooks, Joseph W. Mansur, Kalamazoo, Mich.; Oliver Howe, Titusville, Pa.; James L. Haynes, Peru, Vt.; Solomon F. Towne, Rindge, N. H.; Frank M. Proctor, Westmoreland, N. H.; Henry R. Phelps, Syracuse, N. Y.; Bailey, Cook & Co., Woonsocket, R. I.; William G. Wyman, Maine Prairie, Cal.; Thomas B. Choate, Stockton, Cal.; Horatio Stebbins, San Francisco, Cal.; Henry W. Haskell, Marysville, Cal.; Jacob Brown, Maysville, Mo.; James Houghton, Oakdale; Jones & Perkins, Wilton, N. H.; Frederick J. Billings, Woodstock, Vt.

COMMITTEES AND PREMIUMS

FOR THE

TWENTY-FOURTH ANNUAL EXHIBITION,

TO BE HELD AT FITCHBURG,

TUESDAY, SEPTEMBER 26, 1876.

No person will be allowed to become a competitor for any of the Premiums herein offered, unless he shall have made an entry for the same, with the Secretary, within the time prescribed for each class, nor unless he shall have furnished all required statements relating thereto, within the specified time.

For the convenience of those who live at a distance, entries may be made by mail; and all entries so made must be delivered at some post-office one day previous to the expiration of the time specified, and must bear proof of having been so delivered, either by post-mark, or a certificate of registry from the post-master.

☞ Communications for the Secretary, should be sent to Fitchburg.

STOCK.

All entries for premiums under this head, must be made on or before the Friday previous to the Show, except Horses and Poultry, which may be as late as the Monday previous.

All persons who are required to furnish a statement, must do so to the Secretary, at the time of making the entry, and he shall post copies on the day of exhibition.

All live stock must be owned by the person entering the same.

Each entry of stock for the pens must specify the breed of the animal, if known, and the age.

Under the head Calves, pairs are meant, except the entry "Pens of Calves."

Fat cattle and working cattle must be weighed on the scales on the grounds of the Society, and a certificate furnished the Secretary.

The weight of all other stock will not be required.

All stock, except oxen shown only in Town Teams, taken from the grounds before 4 o'clock P. M., on Tuesday, without permission of the President, shall forfeit all premiums that may have been awarded to it.

The committees on Neat Stock, Sheep, Swine and Poultry, shall make their awards previous to 3 o'clock P. M., on Tuesday. They shall designate the premiums immediately with printed ribbons or cards, blue for first, red for second, and white for third.

The Society will provide good hay for all Stock entered for premium or exhibition during the time of the Show, and will furnish grain at cost, to all who may require it.

Hereafter, the best animals exhibited shall be entitled to the premiums, without regard to former awards.

Committee in charge of Grounds.—Joseph Cushing, Lyman Patch, Fitchburg; William Baker, Lunenburg.

Committee on Pedigrees.—E. T. Miles, Joel Page, Fitchburg; Augustus Whitman, Leominster; John F. Brown, Lunenburg.

Committee on Animals for Exhibition—with authority to recommend gratuities.—E. D. Works, Fitchburg.

Commitee on Forage.—A. P. Goodridge, Fitchburg.

Committee on Finance.—Jabez Fisher, Fitchburg.

THOROUGH-BRED STOCK.

Committee.—Edwin D. Works, Joel Page, Leonard Downe, Fitchburg.

SHORT-HORNS, AYRSHIRES, JERSEYS, DEVONS, OR OTHER THOROUGH-BRED STOCK.

Herds consisting of one bull and not less than four females, all one year old and upwards, and owned by the competitor for four months preceding the show. Two premiums: $6, 4.

BULLS.

Two years old and upwards. Two premiums: $5, 3.
One year old and under two. Two premiums: 4, 2.
Calves (under one year). Two premiums: 4, 2.

COWS.

Four years old and upwards. Two premiums: $3, 2.
Three years old and under four. Two premiums: 2.50, 1.50.
Two years old and under three. Two premiums: 2, 1.
One year old and under two. Two premiums: 1.50, 1.
Calves (under one year). Two premiums: 3, 2.

Competitors may make such statements to the committee as they please, all of which may be considered.

STOCK NOT THOROUGH-BRED.

Thorough-bred Stock may compete in the following classes, but shall have no advantage on account of blood or pedigree.

MILCH KINE.

Committee.—Augustus Gates, Josiah Page, Leominster; Joseph Foster, Ashby.

Herds of four cows or heifers, each. Two premiums: $5, 3.50.

The committee will regard age, expense of keeping, &c.

Cows for butter. Two premiums: $2.50, 2.
Heifers, three years old, for butter. Two premiums: 2.50, 2.

Heifers, two years old, for butter. Two premiums: $2, 1.50.
Cows, for milk. Two premiums: 2.50, 2.
Heifers, three years old, for milk. Two premiums: 2.50, 2.
Heifers, two years old for milk. Two premiums: 2, 1.50.

Competitors may make such statements to the committee as they please, all of which may be considered.

HEIFERS AND HEIFER CALVES.

Committee.—Seth Lowe, Asia S. Jeffts, Fitchburg; F. W. Wright, Ashby.

Intended to be kept for the dairy.

Two years old. Two premiums: $2, 1.50.
Yearlings. Two premiums: 1.50, 1.
Calves more than four months old. Two premiums: 2, 1.50.
Calves more than four months old, raised by hand. Two premiums: 2, 1.50.

Persons exhibiting calves raised by hand, shall furnish statements to the Secretary, of the manner of raising.

YEARLING STEERS, STEER CALVES AND PENS OF CALVES.

Committee.—Abel Marshall, Fitchburg; Henry A. Woods, Leominster; Porter Page, Westminster.

Yearlings. Two premiums: $1.50, 1.
Trained Yearlings. Two premiums: 1.50, 1.
Calves. Two premiums: 3, 2.
Calves raised by hand. Two premiums: 3, 2.
Trained Calves. Two premiums: 2, 1.50.
Best Minor Trainers. Two premiums: 1.50, 1.
Best Pen of Calves, not less than four. Two premiums: 5, 2.50.

Persons exhibiting Calves raised by hand, shall furnish a statement to the Secretary, of the manner of raising.

Calves entered in Pens of Calves cannot compete for premiums as single animals.

WORKING OXEN AND STEERS.

Committee.—William Woodbury, Daniel S. Eaton, Fitchburg; Joseph Cozzens, Leominster.

Working Oxen. Two premiums: $5, 3.
Best Minor Teamsters. Two premiums: 2.50, 1.50.
Steers, three years old. Two premiums: 2.50, 2.
Best Minor Teamsters. Two premiums: 2, 1.
Two years old. Two premiums: 2, 1.50.
Trained, two years old. Two premiums: 2, 1.
Best Minor Trainers. Two premiums: 1.50, 1.

The Working Oxen will be tried attached to loads weighing, including the cart, one-third more than themselves.

The three years old steers will be attached to carts, and tried like the oxen on the same ground; the cart and load to equal the steers in weight.

FAT CATTLE.

Committee.—Wm. C. Emory, Fitchburg; Joel Heywood, Ashby; C. C. Boyden, Leominster.

Best Fat Ox. Two premiums: $4, 2.50.
Best Fat Cow. Two premiums: 3, 1.50.
Best Fat Steer or Heifer. Two premiums: 3, 2.

All competitors with fat cattle may furnish a statement to the Secretary, of the mode and expense of feeding.

SWINE.

Committee.—M. T. Gardner, Shirley; John Lowe, Fitchburg; Franklin Nourse, Sterling.

Must be entered like other stock.

Boars more than one year old. Two premiums: $2, 1.50.
Less than one year old. Two premiums: 1.50, 1.
Best Fat Hogs, having regard to age. Two premiums: 4, 2.

Fat Pigs, less than eight months old. Two premiums: $2, 1.
Breeding Sows. Two premiums: 4, 2.
Weaned Pigs, not less than four. Two premiums: 2, 1.

All Swine, and each litter of Pigs, will be allowed fifteen cents mileage for each mile more than two that they are brought.

POULTRY.

Committee.—Wm. A. Carleton, George Younglove, William Scribner, Fitchburg.

Must be entered like other stock.

Barn-yard fowls, not less than a trio.

Brahmas. Two premiums: $1, .50.
Black Spanish. Two premiums: 1, .50.
White Leghorns. Two premiums: 1, .50.
Any other breed. Two premiums: 1, .50.
Turkeys, not less than a trio. Two premiums: 1.50, 1.
Geese, not less than a trio. Two premiums: 1.50, 1.
Ducks, not less than a trio. Two premiums: 1.50, 1.

TOWN TEAMS.

Committee.—S. F. Whitney, Harvard; Josiah Puffer, Ayer; Porter Piper, Leominster.

Best Town Teams, not less than fifteen yoke from any one town. Two premiums: $15, 10.
These teams may consist of either oxen or steers, or both.

HORSES.

Entries for all horses must be made before 9 o'clock A. M. of the day on which they are exhibited.

GENTLEMEN'S DRIVING HORSES—SINGLE.

Committee.—Rodney Wallace, Fitchburg; D. C. Miles, Westminster; Ohio Whitney, Ashburnham.

Gentlemen's Driving Horses. Four premiums: $6, 4, 3, 2.

Speed considered, but not to govern.

In the trial of horses in this class, they shall make a standing start from the Judges' stand.

MATCHED DRIVING AND FAMILY HORSES.

Committee.—A. L. Burditt, Leominster; S. W. A. Stevens, South Gardner; E. A. Goodrich, Fitchburg.

Matched Driving Horses. Four premiums: $6, 4, 3, 2.
Family Horses—single. Four premiums: $6, 4, 3, 2.

COLTS.

Committee.—Samuel E. Crocker, Fitchburg; John Davis, Ashby; M. H. Keteridge, Leominster.

Stallions, three years old. Two premiums: $5, 2.50.
Geldings, three years old. Two premiums: 3, 1.50.
Fillies, three years old. Two premiums: 3, 1.50.
Stallions or Geldings, two years old. Two premiums: 3, 1.50.
Fillies, two years old. Two premiums: 3, 1.50.
Yearling Colts. Two premiums: 2.50, 1.50.

STALLIONS, MARES AND SUCKING COLTS.

Committee.—Francis Buttrick, E. T. Miles, Fitchburg; John F. Brown, Lunenburg.

Best Stallions for general use, four years old and upwards. Two premiums: $10, 5.
Breeding Mares. Two premiums: 4, 2.50.
Colts less than one year old. Two premiums: 2, 1.50.

The Mares must be four years old and upwards, and accompanied by their Colts.

No premium shall be awarded to a mare known to be unsound.

PLOWING MATCHES.

All entries for Ploughing must be on or before the Friday previous to the Exhibition, and one dollar must be deposited with each entry, to be returned to the competitor if he ploughs, otherwise forfeited to the Society. The swivel plough only will be allowed.

HORSE TEAMS.

Committee.—Edward Bacon, Westminster; H. B. Fuller, Fitchburg; Liberty Wellington, Ashby.

Two premiums: $5, 3.

OX TEAMS.

Committee.—Solon Carter, Leominster; Thomas Sheldon, Fitchburg; Joseph Whitney, Sterling.

Two premiums: $5, 3.

CROPS.

All entries for premiums in this department must be made with the Secretary, on or before June 15th, with the exception of English turnips and cabbages, which must be entered on or before August 15th. Immediately after these dates, the Secretary will transmit to all competitors a blank form, adopted by the Trustees, to correspond with the requirements of the Board of Agriculture.

GRAIN.

Committee.—Samuel Osgood, Sterling; George Reed, Fitchburg; John Hayward, Ashby.

The committee may award gratuities for valuable new varieties of grain.

For the most profitable crops of corn, wheat, rye, barley and oats, one acre each; of cabbages, beans and flax, one-eighth acre each; the product of corn to be not less than 4,320 lbs. on the cob; that of wheat, rye, barley and oats, not less than 1,000 lbs. of grain each.

Corn. Two premiums: $5, 4.
Wheat. Two premiums: 5, 4.
Rye. Two premiums: 2, 1.
Barley. Two premiums: 2, 1.
Oats. Two premiums: 2, 1.
Field Beans. Two premiums: 1, .50.

Samples must be exhibited at the Fair.

ROOT CROPS AND CABBAGES.

Committee.—Cyrus Kilburn, Lunenburg; Benjamin Safford, Fitchburg; Estabrook Moore, Leominster.

For the most profitable crops of potatoes, one-fourth acre each; of carrots, onions, beets and turnips, one-eighth acre each.

Potatoes, not less than 3,000 lbs. Two premiums: $4, 2.50.
Carrots, not less than 5,500 lbs. Two premiums: 2, 1.50.
Onions, not less than 2,000 lbs. Two premiums: 1.50, 1.
Sugar Beets. Two premiums: 1, .50.
Mangel Wurzel. Two premiums: 1, .50.
English Turnips. Two premiums: 1.50, 1.
Turnips of any other variety. Two premiums: 1.50, 1.
Cabbages. Two premiums: 1, .50.

EXHIBITION AT THE HALL.

No article intended for the Hall will be entitled to a premium, unless it shall have been deposited by 6 o'clock P. M., on Monday, except articles from other places than Fitchburg, which may be deposited as late as 8½ A. M. on Tuesday.

All articles should be plainly marked with the name and residence of the exhibitor, except samples of Bread and Butter, which must be designated by numbers. A strict compliance with these regulations will be absolutely necessary to entitle competitors to any premiums that may be awarded to them.

APPLES, PEACHES, PLUMS AND QUINCES.

Committee.—George Jewett, Fitchburg; Alfred Whiting, Oakdale; Martin Johnson, Lunenburg.

APPLES.

Twelve varieties of five specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: 2, 1.50.
Three varieties of five specimens each. Two premiums: 1.50, 1.
Best exhibition of twelve specimens of Baldwins. Two premiums: 1, .50.
Hubbardston Nonesuch. Two premiums: 1, .50.
Rhode Island Greenings. Two premiums: 1, .50.
Roxbury Russets. Two premiums: 1, .50.
Gravensteins. Two premiums: 1, .50.
Palmer Greenings. Two premiums: 1, .50.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

PEACHES.

Best collection. One premium: $3.
Best dishes or baskets. Two premiums: 2, 1.

PLUMS.

Best collection. One premium: $2.
Best plates. Two premiums: 1, .50.

QUINCES.

Best dishes or baskets. Two premiums: $1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

PEARS AND GRAPES.

Committee.—A. B. Holden, Westminster; Charles A. Emory, Fitchburg; Wm. D. Peck, Sterling.

PEARS.

Twelve varieties of five specimens each. Two premiums: $3, 2.
Six varieties of five specimens each. Two premiums: 2, 1.50.
Three varieties of five specimens each. Two premiums: 1.50, 1.
Best exhibition of twelve specimens of Bartletts. Two premiums: 1, .50.
Seckel. Two premiums: 1, .50.
Flemish Beauty. Two premiums: 1, .50.
Duchess. Two premiums: 1, .50.
Louise Bonnie de Jersey. Two premiums: 1, .50.
Lawrence. Two premiums: 1, .50.
Beurre d'Anjou. Two premiums: 1, .50.
Sheldon. Two premiums: 1, .50.

GRAPES.

Best displays of varieties of Native Grapes. Two premiums: $5, 3.
Best six clusters Concord. Two premiums: 1, .50.
Best six clusters Delaware. Two premiums: 1, .50.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

No person will be allowed to compete for a premium in more than one of the above classes, with the same specimens of fruit; and if the number of specimens exhibited does not correspond with these regulations, the fruit will be excluded from competition for the premiums.

ASSORTED FRUITS AND FLOWERS.

Committee.—Mrs. Stephen Shepley, Mrs. Alfred Hitchcock, Mrs. E. B. Sawtell, Fitchburg.

ASSORTED FRUITS.

Best dishes or baskets. Two premiums: $2, 1.

PLANTS IN POTS.

Best displays of named Plants in pots. Two premiums: $2, 1.
Best three named Plants in pots. Two premiums: 2, 1.
Best displays of Cut Flowers. Two premiums: 2, 1.
Best five named Asters. Two premiums: 2, 1.
Best five named Dahlias. Two premiums: 2, 1.
Best five named Verbenas. Two premiums: 2, 1.
Best pair of Parlor Bouquets. Two premiums: 2, 1.
Best pair of Hand Bouquets. Two premiums: 2, 1.

The best plants in pots cannot compete for both the best display and the best three; nor can the same Asters, Dahlias or Verbenas, compete for the best display and the best five.

In addition to the above premiums, there will be placed at the disposal of the committee, for gratuities, ten dollars.

VEGETABLES.

Committee.—Jabez Fisher, Sylvanus Sawyer, Fitchburg; John Minot, Westminster.

Best collections of Kitchen Vegetables. Two premiums: $4, 3.
Collections of Potatoes. Two premiums: 2, 1.
Marrow Squashes. Two premiums: 1, .50.
Hubbard Squashes. Two premiums: 1, .50.
Crookneck Squashes. Two premiums: 1, .50.
Pumpkins. Two premiums: .75, .50.
Cabbages. Two premiums: .75, .50.
Cauliflowers. Two premiums: .75, .50.
Celery. Two premiums: .75, .50.
Onions. Two premiums: .75, .50.
Turnip Beets. Two premiums: .75, .50.

English Turnips. Two premiums: 50, .25.
Tomatoes. Two premiums: .50, .25.
Field Beans. Two premiums: .50, .25.
Lima Beans. Two premiums: .50, .25.
Seed Corn in traces. Two premiums: $1, .75.

The committee will regard perfection of growth and quality, and not size.

In addition to the above, there will be allowed for gratuities, ten dollars.

Of squashes, pumpkins, cabbages and celery, there should be six specimens in each lot; of cauliflowers, three; of onions, beets, turnips and tomatoes, one peck in each lot; of field beans, one-half peck; and of Lima beans, two quarts.

BREAD, BUTTER, CHEESE, PICKLES, PRESERVES AND JELLIES.

Committee.—Mrs. Jabez Fisher, Mrs. John B. Proctor, Mrs. William Woodbury, Fitchburg.

Bread made by the exhibitor.

White Bread. Three premiums: $2, 1, .50.
Unbolted Wheat Bread. Three premiums: 2, 1, .50.
Bolted Rye Bread. Three premiums: 2, 1, .50.
Rye and Indian Bread. Three premiums: 2, 1, .50.

BUTTER AND CHEESE.

Lump Butter, not less than 12 lbs. Two premiums: $4, 3.
June Tub Butter, not less than 25 lbs. Two premiums: 3, 2.
September Tub Butter, not less than 25 lbs. Two premiums: 3, 2.
Cheese, not less than 50 lbs. Two premiums: 2, 1.50.

PICKLES AND HONEY.

Pickles. Two premiums: $1, .50.
Virgin Honey in the comb. Three premiums: 2, 1, .50.
Canned Fruits, best collections. Two premiums: 2, 1.

In addition to the above, there will be allowed for gratuities, ten dollars.

Competitors will be required to furnish to the Secretary, a detailed statement, in writing, of the process of manufacturing butter, cheese and pickles; and no others shall be considered.

MANUFACTURED ARTICLES.

Committee.—John Q. Wright, Aaron Wilkins, George F. Simonds, Fitchburg.

Specimens exhibited must be manufactured by the competitor.

For the best specimens of manufactured articles, exclusive of ladies' home manufacture, actually produced by the exhibitor, there will be placed at the disposal of the committee, the sum of one hundred dollars.

For the best exhibition of manufactured articles, not actually the product of the exhibitor, there will be placed at the disposal of the committee, the sum of fifty dollars.

FINE ARTS.

Committee.—Mrs. Alfred Miller, Mrs. Charles Mason, Fitchburg; Mrs. F. W. Wright, Ashby.

Best collections by a Photographic Artist. Two premiums: $2, 1.
Oil Paintings. Two premiums: 2, 1.
Best Crayon Drawings. Two premiums: 1.50, 1.
Pencil Drawings. Two premiums: 1, .50.
Best specimens of Penmanship by a non-professional. One premium: .50.

In addition there will be placed at the disposal of the committee for gratuities, the sum of ten dollars.

Specimens exhibited must be actually executed by the competitor.

FANCY ARTICLES.

Committee.—Mrs. L. H. Bradford, Miss Alice Shepley, Fitchburg; Mrs. M. T. Gardner, Shirley.

For the best specimens of Ladies' Useful and Fancy Articles of their own manufacture, including specimens of nice mending and darning, there will be placed at the disposal of the committee, the sum of thirty dollars.

COMMITTEES' REPORTS.

Committee.—The President, Vice Presidents and Secretary.

For the purpose of inducing the chairmen of the several committees to take upon themselves more labor and care in elaborating their reports, the following premiums will be paid: $10, 6, 4.

Detailed reports in connection with awards (except on Grain and Root Crops,) must be delivered to the Secretary on or before November 1st.

PROSPECTIVE EXPERIMENTS.

FOREST TREES.

Committee.—W. B. Hosmer, George Merriam, Leominster; J. P. Putnam, Fitchburg.

For the best Plantation of any kind of Forest Trees, suitable for fuel or timber, raised from the seed, not less than five hundred in number, which shall be in the most flourishing condition in the Fall of 1876. Two premiums: $15, 10.

Entries must be made on or before the first day of June.

COMMITTEE OF ARRANGEMENTS.

JOHN B. PROCTOR, Fitchburg.
C. C. BOYDEN, Leominster.
JOHN F. BROWN, Lunenburg.
EDWARD B. SAWTELL, Fitchburg.

RULES.

All teams entered for draught must be owned by the person entering the same.

Any person competing for a premium, who shall serve on the committee having charge of the department in which he competes, shall retire from the committee while his own competition is in question.

The several committees will not consider themselves bound by the terms of the above offers, to award a premium for anything which they shall deem inferior.

Any person to whom a premium shall have been awarded in consequence of any deception or misrepresentation used by him, shall not only forfeit such premium, but afterwards be incapable of competing for the Society's premiums.

All persons, ladies and minors excepted, not members of the Society, to whom may be awarded a premium, or premiums, amounting to five dollars or upward, shall receive a certificate of membership for five dollars, and the balance in cash. If the amount shall be less than five dollars, a deduction of fifty per cent. will be made, unless the individual chooses to make the amount up to that sum, and receive a certificate of membership.

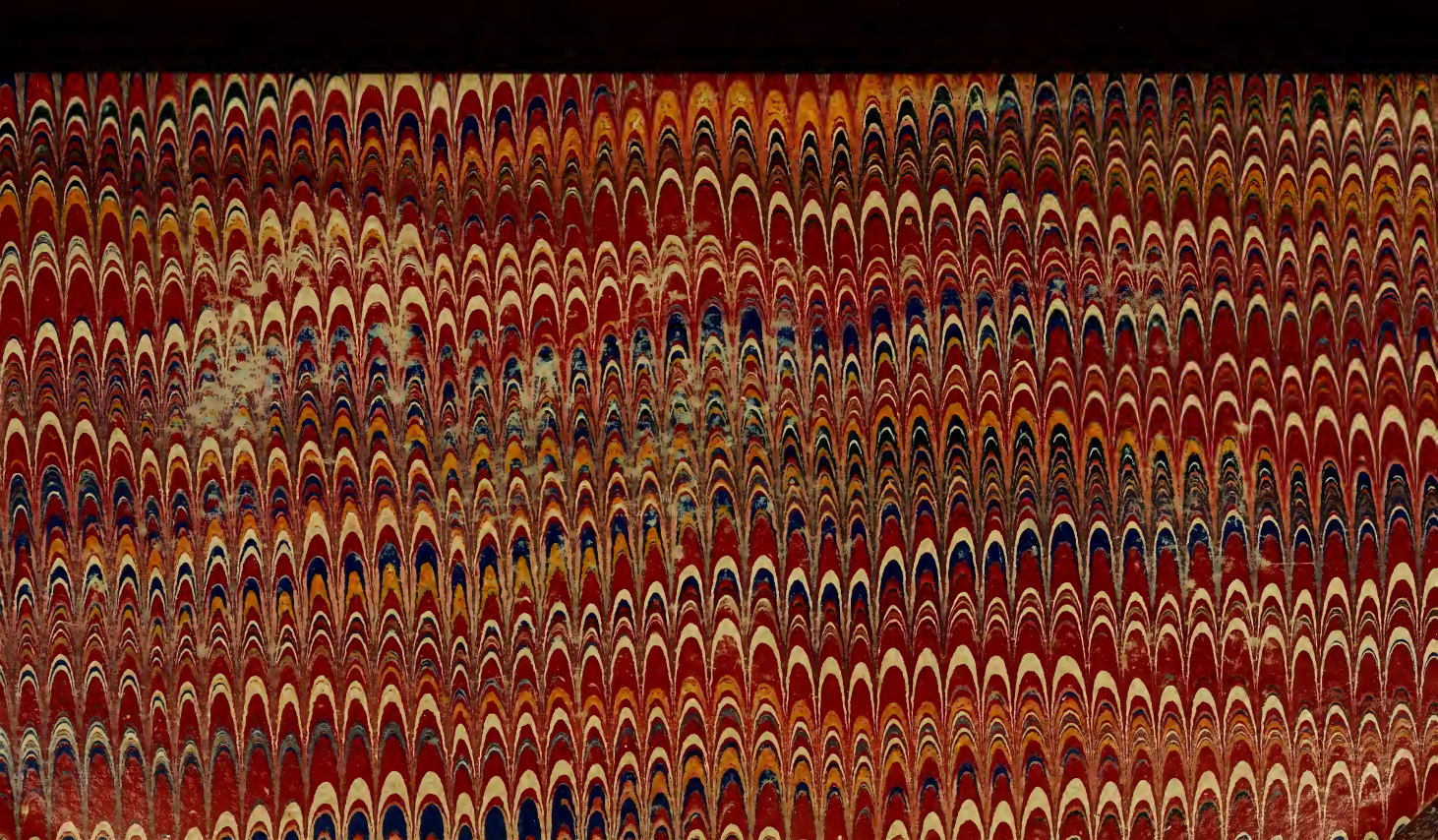
All premiums not demanded on or before November 30th, will revert to the Society.

OFFICERS OF THE SOCIETY FOR 1876.

Elected at the Annual Meeting, Dec. 1st, 1875.

JOHN B. PROCTOR of Fitchburg, *President.*
CHARLES C. BOYDEN of Leominster, } *Vice-Presidents.*
JOHN F. BROWN of Lunenburg, }
EDW. B. SAWTELL of Fitchburg, *Secretary and Treasurer.*

TRUSTEES:

Ohio Whitney, Ashburnham,	Lorenzo Barker, Fitchburg,
Joel Hayward, Ashby,	David Boutelle, "
F. W. Wright, "	Charles H. Brown, "
S. W. A. Stevens, Gardner,	Joseph Cushing, "
S. F. Whitney, Harvard,	Jabez Fisher, "
W. B. Hosmer, Leominster,	Abel Marshall, "
Geo. H. Grout, "	Eugene T. Miles, "
Cyrus Kilburn, Lunenburg,	Joel Page, "
Alfred Whiting, Oakdale,	George Reed, "
N. B. Reed, Princeton,	J. M. Sawtell, "
M. T. Gardner, Shirley,	Stephen Shepley, "
Franklin Nourse, Sterling,	Harrington Sibley, "
Warren Simonds, Templeton,	Geo. H. Spencer, "
D. C. Miles, Westminster,	William Woodbury, "
Edward Bacon, "	Edwin D. Works, "
Orlando Mason, Winchendon,	

Stephen Shepley of Fitchburg, elected *Member of the State Board of Agriculture*, December 2d, 1874, for three years.